Hawkeye policy report: Iowa Policy Research Organization 2017-2018

Iowa Policy Research Organization, University of Iowa

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HAWKEYE POLICY REPORT

Iowa Policy Research Organization

2017-2018

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Iowa Policy Research Organization (IPRO)

1. Background

1.1 What is Iowa Policy Research Organization?

IPRO (the Iowa Policy Research Organization) was founded in 2006 by Professor Tom Rice, who started a similar organization during his time at the University of Vermont, called the Vermont Legislative Research Shop. When Tom left the classroom in 2010 to become Associate Provost for Faculty, Professor Rene Rocha took over the class shortly thereafter. In 2017, Professor Bryce J. Dietrich became IPRO's fourth director and ultimately edited the first annual *Hawkeye Policy Report*.

Students of IPRO collaborate to provide the Iowa legislature with timely, high quality research and information on important policy issues facing our state. IPRO members meet major figures in government and politics throughout Iowa and communicate the results of their research directly with Iowa legislators and other policymakers. Recent reports have examined a wide range of issues, including mandatory drug testing for welfare recipients, state recycling programs, and regulations on agricultural runoff.

Those who join IPRO gain valuable skills in research, writing, and teamwork. Nic Pottebaum, who participated in the program in 2010, says this about IPRO:

> The Iowa Policy Research Organization puts honors students in a graduate-style learning environment, which is not found in most undergraduate education experiences. As a result of this, it not only challenged me but accelerated my abilities. IPRO has provided a unique experience that is beneficial for any post-graduate plans [30].

Virginia Davis, a 2015 IPRO alumnus, echoed these sentiments in her article “Students Engage Locally and Nationally" where she said:

> IPRO is not only an excellent way for students to develop an honors community and work closely with their peer group but also a way for them to engage in the Iowa City community. Their reports and research have appeared in Press Citizen and The Daily Iowan. Involvement in IPRO is especially good for students who are considering graduate school in policy. Alumni of the program have gone on to do political research in various settings around the country [8].

We want Iowa citizens, students, and legislators to be fully informed about the many important issues facing our state. IPRO helps students achieve this end while simultaneously giving them the experience and skills necessary for affecting public policy in Iowa and beyond.

1.2 How Do I Become an IPRO member?

The IPRO recruitment process has remained largely the same every since Prof. Rice started the program in 2006. An email is sent to all honors students and political science majors explaining the course and inviting them to submit a resume. The best applicants are then interviewed before they are finally invited to join IPRO. Although numbers do vary, for the most part, IPRO only admits 12-15 students a year, meaning IPRO members are truly the best of the best.

Not only are IPRO students active in a number of student organizations, like College Democrats, College Republicans, and Student Government, but they are also among the top students in their respective classes. More specifically, IPRO students have excelled in a number of relevant substantive and methodological classes, ranging from introductory/advanced statistics to more specific classes on public health policy. Simply put, IPRO students are some of the best in political science and the university as a whole.

1.3 How Do I Learn More About IPRO?

To find out more information about IPRO, please visit our website: `https://honors.uiowa.edu/experiential-learning/ipro`. There you will find relevant contact information and also more information about our organization. You can also follow us on Twitter (`@IowaPolicy`). We are currently updating both our website and Twitter page, so please continue to check both in order to find the latest information about IPRO! For more a more detailed description about IPRO, please read "Students as Policy Researchers for State Legislatures" in: *Civic Service: Service-Learning with State and Local Government Partners. John Wiley & Sons, 2009* by David Redlawsk and Tom Rice. More general descriptions can be found in several iterations of the Honors and Political Science newsletters. Additional information is available upon request. If you need anything else, please email our director Professor Dietrich (`bryce-dietrich@uiowa.edu`). He would be happy to answer any and all inquiries!

2. Membership

2.1 Current Members

In this section, we provide biographies for each member of our Des Moines delegation and the names of each legislative research seminar participant. Short descriptions of the “Des Moines Delegation" and “Legislative Research Seminar" are also provided below.

- The tax policy research team (Kyle Apple, Barrett Bierschenk, and Austin Wu) wrote the “Are We Ready for Corporate Tax Reform?” chapter. Kyle Apple and Austin Wu edited the chapter and put together the final version for the *Hawkeye Policy Report*.
- The chapter titled “Do You Vouch for School Vouchers?" was written by the IPRO education research team (Jennifer Eggerling, Marcus Miller, and Matthew Wallack). All three team members helped finalize the chapter for publication in the annual IPRO magazine.
- The health care research team (Kiera Deal, Logan Drake, and Lauren Ellobogen) wrote the “Is Iowa’s Health Care Too Managed?" chapter. Logan Drake and Lauren Ellobogen edited the chapter and put together the final version for the *Hawkeye Policy Report*.

The chapter order was chosen randomly. All authors and editors are listed in alphabetical order. Although far from the primary author, the IPRO director (Bryce J. Dietrich) helped with minor editing and formatting issues.

2.1.1 Des Moines Delegation

After completing the legislative research seminar, several IPRO members are chosen to serve as our Des Moines delegation. These individuals take another course the following Spring in order to put together the *Hawkeye Policy Report* and ultimately present it to the state legislature during the *Hawkeye Caucus Day*. Not only does the Des Moines Delegation edit each aspect of the *Hawkeye Policy Report*, but they also meet individuals on and off campus to talk about IPRO. For example, in 2018, the Des Moines Delegation discussed IPRO with Jason Kander who was the former Missouri Secretary of State and ran for the U.S. Senate in 2016. These experiences highlight the Spring course and also underline the importance of the Des Moines Delegation. Both inside and outside the classroom, these Honors students represent the political science department and the university as a whole. IPRO really could not function without their help!

2.1.2 Legislative Research Seminar

IPRO also relies heavily on the legislative research seminar participants. In this class, students learn about policy analysis and begin researching topics that are important to the state of Iowa. This is facilitated primarily using three person research teams. These teams are comprised of students with common research interests. For the next three months, each research team analyzes and discusses their chosen topic, ultimately producing a 20-30 page white paper. IPRO also owes a debt of gratitude to these fantastic Honors students!

2.2 Past Members

IPRO members past and present are an essential part of our organization. Even though most students come from political science, we have also had representatives from economics, ethics, and public policy. Their hard work and dedication to IPRO's mission cannot be understated. A lot of IPRO communication happens on our organization's Slack channel. We do this because we want to give past IPRO members the ability to communicate directly with our current members.

The first day of the legislative research seminar begins with a discussion of the past, present, and the future of IPRO. This is because we view IPRO as a continuing organization, meaning those who took IPRO in the past are always part of IPRO's present and future. Ever since its first iteration, the *Hawkeye Policy Report* has listed all the former IPRO members precisely for this reason. We want to show our current members that they are really part of something special! Even though they may no longer live in Iowa City, they are still a member of IPRO!

2.2.1 Des Moines Delegates

2017-2018

- Kyle Apple – Economics
- Logan Drake – Economics
- Jennifer Eggerling – Political Science
- Lauren Ellbogen – Political Science
- Marcus Miller – Political Science
- Matt Wallack – Political Science
- Austin Wu – Public Health

2.2.2 Legislative Research Seminar Participants

2017-2018

- Kyle Apple – Economics
- Kiera Deal – Health and Human Physiology
- Logan Drake – Economics
- Jennifer Eggerling – Political Science
- Lauren Ellbogen – Political Science
- Scott Hastings – Political Science
- Riley Lewers – Political Science
- Marcus Miller – Political Science
- Gustave Stewart – Political Science
- Matt Wallack – Political Science
- Austin Wu – Public Health

Bryce J. Dietrich

Director

Bryce J. Dietrich is an assistant professor of social science informatics in the Department of Political Science and the Department of Sociology at the University of Iowa. He is also currently a faculty member in the Iowa Informatics Initiative (UI3). His research uses novel quantitative, automated, and machine learning methods to analyze non-traditional data sources such as audio (or speech) data and video data. He uses these to understand the causes and consequences of elite emotional expression in a variety of institutional settings, with a particular emphasis on non-verbal cues, such as vocal pitch. More recently, he has used text, audio, and video analysis to explore issues related to descriptive representation and implicit gender/racial bias. His work has appeared in Political Psychology and is forthcoming in Political Analysis and the Journal of Elections, Public Opinion, & Parties. He received his Ph.D. from the University of Illinois. He also received an MA from the University of Kansas. His work has received grant support from Amazon, C-SPAN, and the Kinder Institute on Constitutional Democracy. It also won the Kathleen L. Burkholder Prize from the University of Illinois and was cited on FiveThirtyEight.

Kyle Apple

Des Moines Delegation
Tax Policy Research

Kyle Apple is a sophomore from Eldridge, Iowa studying economics and political science. Within political economics, Kyle is specifically interested in the effects of different fiscal and monetary policy alternatives at the state and national level. At the University of Iowa, he is involved in College Republicans organization, where he is currently the Vice President or the organization. After finishing his undergraduate studies, Kyle plans on attending law school to focus on constitutional law, before moving to Washington, DC to work in legislative politics.

Logan Drake

Des Moines Delegation
Health Care Research

Logan Drake grew up in Dubuque, Iowa. He is now a third-year student earning degrees in economics, philosophy, and ethics and public policy. After graduation he plans to pursue a Masters of Public Policy and work as a policy analyst, helping to shape the national policy discussion, with particular interest in healthcare, education, and social policy. Logan is a member of the Bertrand Russell Society and the Beta Gamma Sigma Business Honor Society. He works as a peer mentor in both the University of Iowa Honors Program and the Tippie College of Business and has worked as an intern for the Philosophy Department. He has presented at the Iowa Undergraduate Philosophy Colloquium, was a finalist in the Mary Thomas Prappas Ethics Essay Contest, and this summer will begin work at the Iowa Public Policy Center, focusing on education policy. He enjoys spirited political debates, especially those which take place on forest trails, and spending time with his cat Finley.

Jennifer Eggerling

Des Moines Delegation
Education Research

Jennifer Eggerling is from Sergeant Bluff, IA and is a junior majoring in Political Science and Gender, Women's, & Sexuality Studies on the Pre-Law track. She has always been interested in politics and policy. During the 2015 legislative session, Jennifer worked as a Page for the Legislative Services Agency. She is currently working as a finance fellow for the Iowa Senate. She is involved in many organizations on campus including 50/50 in 2020 Iowa, Phi Alpha Delta Pre-Law Fraternity, and Dance Marathon. She is also is currently working as a research assistant for Professors Dietrich (University of Iowa) and Sands (UC-Merced). She was motivated to join IPRO as a way to examine the pressing issues facing Iowa and continue her interests in public policy.

Lauren Ellbogen

Des Moines Delegation
Health Care Research

Lauren Ellbogen is a junior double majoring in political science and ethics and public policy. She is also working on receiving honors in political science at the University of Iowa. She is fascinated with how policy research is conducted and how it is them implemented. Her honors thesis titled, *An Analysis of Client Service Within Policy Analysis Organizations*, underscores this interest. In that paper, she conducted several interviews to understand how the Iowa Public Policy Center and other similar policy analysis organizations meet client demands. More recently, she has started a student organization at Iowa which engages students in policy research as well as coalition building and lobbying efforts on behalf of that policy research.

Marcus Miller

Des Moines Delegation
Education Research

Marcus Miller grew up in Johnston, IA. He is now a junior at The University of Iowa, double majoring in Political Science and Ethics/Public Policy with minors in Business Administration and Philosophy. Marcus plans to attend law school with an interest in criminal law. His research has focused on education non-profit organizations, like the National Teachers Association, with a specific focus on the intersections of race and religion. He also co-founded *Project Silence No More* which aims to address mental health and suicide prevention training in the Johnston community by working closely with administrators, teachers, current students, and community leaders. Marcus volunteers with *Table to Table*, *Iowa Legal Aid*, and the *Ronald McDonald House*. He has also helped first year-students transition and excel as a Resident Assistant. In his free time, he enjoys running, playing the violin, and playing tennis.

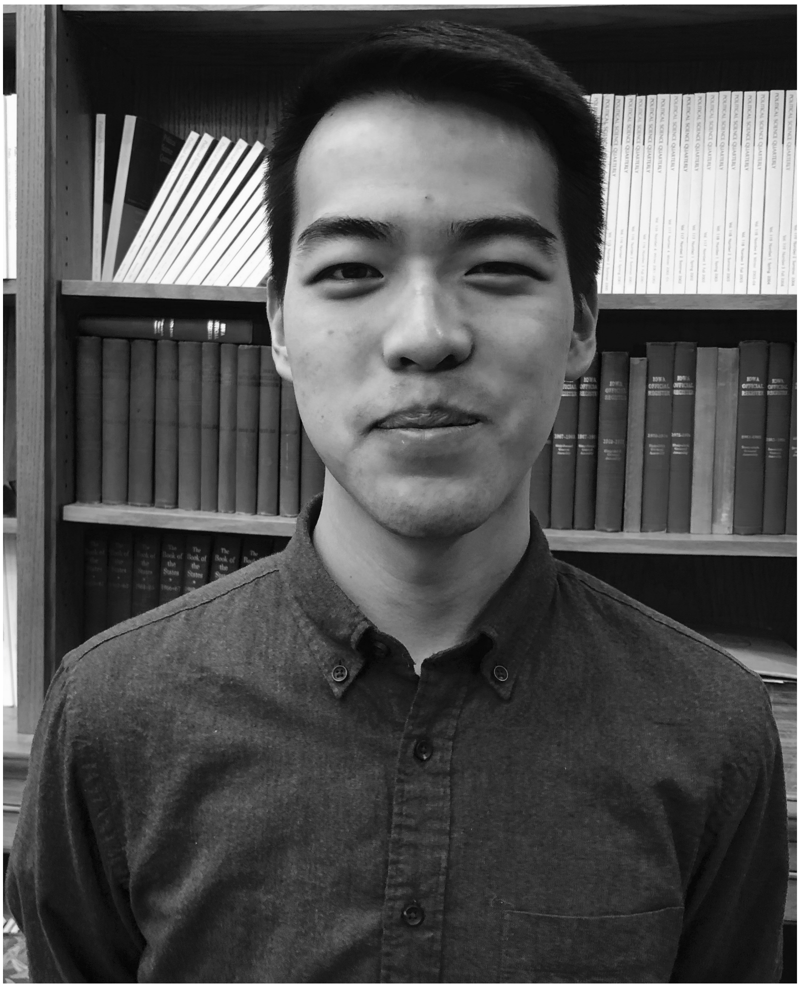
Matthew Wallack

Des Moines Delegation
Education Research

Matthew Wallack grew up in Thousand Oaks, CA. He is now a junior at The University of Iowa, majoring in Political Science. Matthew plans to attend graduate school with an interest in International Politics or Political Theory. He has also been involved on campus, serving on the University of Iowa's Hillel student board, and more recently, joining KRUI-FM, the University of Iowa's radio station. In his free time, he enjoys debating, reading, and watching baseball.

Austin Wu

Des Moines Delegation
Tax Policy Research



Austin Wu is a second-year student from Cedar Rapids, IA. He is currently majoring in public health with minors in political science and history. He has taken interest in politics from a young age, and has since worked with various political campaigns and organizations, including as a precinct captain for the Bernie Sanders campaign during the 2016 caucuses and with NextGen Climate during the 2016 general election. More recently, he has worked with Congressman Dave Loebsack's campaign and has served as a senator in the University of Iowa Student Government.

Legislative Research

3. Is Iowa Ready for Tax Reform?

3.1 Executive Summary

The corporate income tax plays a pivotal role in many state budgets across the country, with some states opting to tax corporate income based on a graduated system, while others have a flat tax in place. **Higher corporate taxes act as a disincentive for corporate investment, while lower rates attract large companies.** Using data on corporate tax rates throughout the country, we ultimately find the following:

- Only 44 of the 50 states tax corporate income directly. Of the 44 states that tax corporate income, the average tax rate is 6.08% (2013).
- Of these 44 states, Iowa has the highest marginal tax rate at 12%, and ranks 41st in revenue collections from corporate taxes.
- By reforming the corporate tax code in Iowa, the state legislature can maximize revenue collection while simultaneously preventing crippling budget cuts.

After evaluating increases and decreases in the corporate tax rate based on changes in revenue collections, changes in state productivity, and the qualitative measure of social acceptability, **we recommend the following policies be implemented to Iowa's corporate tax code:**

(1) The corporate tax structure should retain the current four income-based brackets.
(2) Iowa's existing progressive tax rates of 6% and 8% should not be changed.
(3) The current 10% rate should be decreased to 8.5%, which we argue will have a positive effect on state revenue collections.
(4) The current 12% rate should be lowered to 9.5%, making it comparable to Iowa's peer states.
(5) In order to monitor progress, the reform should be rolled out over a period of three years. Such a timeline would allow the legislature to make necessary changes in order to perfect the policy once it is implemented.

Implementing our proposed solutions will allow Iowa to grow corporate investment without the government arbitrarily giving tax breaks to large corporations who consider establishing locations in the state. As a result, the general assembly can use increased revenue collections to fund programs affected by recent budget deficits.

Corporate tax reform in Iowa is long overdue, and with the proper implementation, the state will experience rapid corporate expansion which will fuel the economy and the state's budget for years to come.

3.2 Introduction

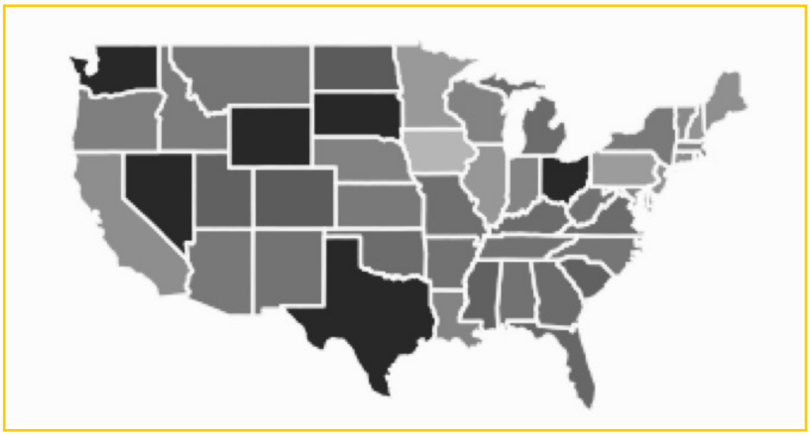
The corporate income tax plays a pivotal role in both the federal and state budgets, and is a key source of revenue for all levels of government. While the federal government taxes corporate income at a uniform rate regardless of state affiliations, there are large variations in corporate taxes at the state level – a mix of states have flat tax rates, while other states use a bracketed tax system based on levels of income. Therefore, the combination of federal corporate income taxes and varying state corporate tax rates creates a problematic tax system for corporations. These variations among states specifically create problems for businesses that operate in multiple states, as they are required to pay taxes on the income generated in each state. Furthermore, state corporate tax rates incentivize businesses to invest in certain states, while driving investment away from others.

In Iowa, the corporate tax rate is intriguing because the state relies on the tax to fund its state budget, yet the tax code is written in such a way that fails to maximize revenue collections from corporate taxes. Iowa's tax rate is so high that businesses rely on massive and arbitrary incentives to invest in the state, restricting entry into the state economy and therefore restricting revenue to the government in the form of corporate taxes. Reducing the corporate tax rate will increase corporate investment in the state, generating more government revenue to offset budget shortfalls the state has faced in recent years.

3.3 Corporate Tax Rates

3.3.1 United States

Figure 3.1: Current Corporate Tax Rate By State



Note: Corporate tax rate data compiled by the Federation of Tax Administrators represents the 2013 corporate income tax in the United States (Alaska and Hawaii are omitted from all maps). Within the figure, darker shades represent lower tax rates, while lighter shares represent higher rates. The lowest rate in the country is 0%, while 12% is the highest rate.

Despite the corporate income tax playing a significant role in state budgets, not every state levies taxes on corporate income, as shown in Figure 3.1 below. Of the 44 states that currently tax corporate income, Iowa has the highest marginal rate in the country at 12%, while the average corporate tax rate among these 44 states was 6.08% in 2013 [17]. States with lower corporate tax rates often see increased growth in businesses, and generally see increased revenue collected from corporate taxes due to the growth of the private sector, a concept which will be analyzed in detail later in this paper.

Notice in Figure 3.1 that large states traditionally known for their corporate presence – for example, California – have relatively modest corporate tax rates compared to Iowa. It comes as no surprise that large corporations choose to establish offices in California in order to avoid paying more in income taxes. This is because corporations take tax liabilities into consideration when deciding where to open offices and headquarters, and Iowa's current rate of 12% puts the state at a competitive disadvantage relative to competing states with lower rates. Among peer states in the Midwest, the next highest rate is in Minnesota (9.8%), while Missouri (6.25%) has the lowest tax rate on corporate income.

Table 3.1: Peer States' Corporate Income Tax Rates

State	Tax Structure	2013 Tax Rate
Kansas	Bracketed	4% → \$0 7% → \$50K
Nebraska	Bracketed	5.58% → \$0 7.81% → \$100K
Iowa	Bracketed	6% → \$0 8% → \$25K > 10% → \$100K > 12% → \$250K >
Missouri	Flat	6.25%
Indiana	Flat	7.50%
Wisconsin	Flat	7.90%
Minnesota	Flat	9.80%

Note: Current corporate tax rate data reflects 2013 tax rates compiled by the Federation of Tax Administrators [33]. Peer states in the table were selected based on their geographic and economic similarities to Iowa. All of the peer states in the table are generally regarded as being in the Midwest region, and each state has one major economic center, with the exception of Missouri, which has two. Within states that operate on a bracketed tax system, the monetary values in the tax rate column reflect the levels of corporate income subject to the respective tax rate.

Table 3.1 shows that Iowa's tax system is also more complex than its peer states that operate under a graduated system, having four tax brackets based on income levels, while Kansas and Nebraska have only two brackets. The additional brackets cause greater variations in tax rates between different income levels, although most corporations in the state reach the top threshold each fiscal year. Therefore, bracketed tax systems are commonly referenced by the highest rate in the income bracket.

In addition to the statutory rate, companies also consider the bracketed or flat tax system that each state has in place when making investment decisions. Notice in Table 3.1 that peer states such as Wisconsin and Minnesota have relatively high flat tax rates relative to the national average of 6.08%, at 7.9% and 9.8%, respectively; however, these rates are much lower than the 12% tax that most Iowa companies are subjected to, because the flat tax combines the lower and higher brackets into a constant rate across all levels of income.

Corporate Tax Rates in the United States

Corporate tax rates influence business decisions related to corporate investment, most notably when deciding in which states to operate. Higher corporate taxes act as a disincentive for corporate investment, while lower rates attract large companies. We begin our research by observing trends in the corporate tax rate throughout the country, focusing specifically on a group of states we consider similar to Iowa, both in a geographic and economic sense. Based on our observations, we find:

- Only 44 of the 50 states tax corporate income directly. Ohio uses a Corporate Activities Tax, which is similar to a corporate income tax but includes major variations. For the purposes of this research, we assume Ohio does not have a tax on corporate income.
- Of the 44 states that tax corporate income, the average tax rate is 6.08% (2013).
- Iowa's 12% tax on corporate income is the highest in the nation. The next highest rate within its group of peer states is 9.8% in Minnesota.
- Within Iowa's peer states, approximately half have graduated tax systems and half have flax taxes. For states with graduated taxes, we assume the top rate as the marginal tax.

Because of the lower corporate income tax rates in Iowa's peer states, corporations are choosing to establish locations in these states. In order to incentivize businesses to locate in Iowa, the state needs to bring its marginal corporate tax rate in line with its peers.

While lower levels of income may be overtaxed under a flat rate system, higher levels of income will be undertaxed, leading to a lower tax liability and increased profits for corporations. This tax behavior increases the tax burdens on low-revenue business, but also incentivizes large corporations to invest in the state economy. Keeping tax behavior in mind, we now shift our focus to Iowa, and how the corporate tax structure has evolved over time to its current bracketed rate of 12%.

3.3.2 Iowa

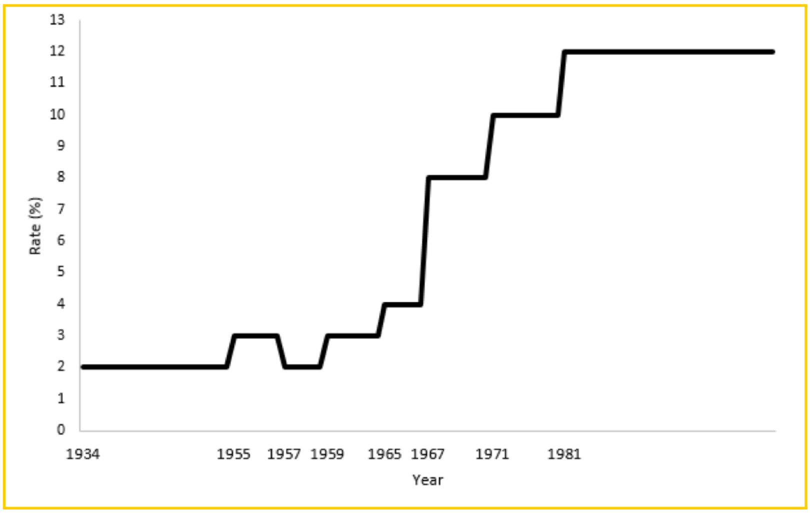
While Iowa's top corporate income tax rate of 12% is the highest in the nation, the state has not always taxed corporate income at such high levels. When corporate income collections began in 1934, the tax rate was a flat 2% for all levels of corporate income. As the state economy expanded, lawmakers gradually raised the flat rate, until all corporate income was taxed at 4% in 1965. Upon raising the corporate rate again in 1967, the state moved from a flat rate to a graduated rate, which maintained the bottom rate of 4% while adding brackets at 6% for income over $25,000 and 8% over $100,000 [28]. Because most corporations earn over $100,000 in revenue during a given year, the average Iowa business saw their income tax liability double.

Figure 3.2 shows how the tax code has evolved since the implementation of the graduated system in 1967, with the most recent change coming in 1981 when the 12% bracket was added to income in excess of $250,000. The statutory corporate tax rate has not been modified in any way since this addition. However, before this change, the state legislature modified the corporate tax rate regularly in order to find the optimal rate given the current economic climate. While it is unwise to frequently change the rates given the current strength of the state economy, the business climate has changed drastically since the 1980s, warranting a reform of the statutory corporate income tax rate for the first time in nearly four decades.

While Iowa does have the highest statutory tax rate in the country, corporations often experience a lower effective rate due to tax benefits and other economic incentives. In fact, despite having the highest tax rate amongst its peer states, Iowa ranks 3rd from the bottom in terms of total revenue generated from corporate income taxes in 2013 [16].[1] Due to the unusually large difference between

[1] State & Local Government Finance Reports generated by the Tax Policy Center of the Urban Institute and Brookings Institution. Further references to State & Local Government Finance data will be cited with the date of publication and a reference to this note.

Figure 3.2: Iowa Corporate Tax Rate History



Note: Data compiled by the Iowa Department of Revenue. Line represents the historical trend in Iowa's corporate income tax rate from its creation in 1934 to the present. Each year along the x-axis represents a year in which the state changed the corporate tax rate. An increase (decrease) in the rate at a given year reflects a change that occurred in that given year, while the flat portions of the line represent years in which the tax remained constant. The rate has steadily increased since its beginning, with only one decrease in 1957. Graph not necessarily drawn to scale.

the statutory tax rate and actual tax collections, tax credits and incentives must be evaluated along with the reform of the statutory rate, in order to reduce the stagnation of corporate tax revenue as the state economy continues to grow.

The Iowa Department of Revenue offers numerous tax credits and incentives for companies to reduce their tax liability, including both nonrefundable tax credits (reductions of the liability), and refundable tax incentives (monetary refunds directly to the company). In 2012, the state recorded approximately \$19.7 million in nonrefundable tax credits applied to corporate liability, and refunded over \$67.7 million in tax incentives [15]. With a 2012 corporate tax collection of \$426 million, the credits and incentives account for a corporate tax revenue loss of nearly 16% of the total liability incurred (2012). As credits and incentives compile, corporations are allowed to defer their benefits to future years, and collect on their credits in years where they were not earned. As incentives are carried forward into future years, state revenue collections continue to decrease, causing budget shortfalls that force the legislature to consider funding cuts to valuable public programs.

Iowa has also drastically increased its reliance on revenue from corporate income taxes in recent years, which makes the aforementioned tax incentives even more alarming. In the early 2000s, the state was collecting between 2-3% of its total revenue from corporate income taxes [4]. As of 2013, 5.1% of state revenue was collected from corporate taxes, which is only slightly below the national average of 5.3% [4]. The increase in reliance on corporate taxes as a source of government revenue, paired with large corporate tax refunds, means that Iowa is depending on the same source of income that it willingly gives back to taxpayers in order to fund its general budget.

Because Iowa relies relatively heavily on corporate tax revenue to support its government budget, the state could see large revenue increases in the event of successful tax reform. When these revenue increases are realized, the question then turns to spending the additional funds on public programs. At the very least, the state should replenish emergency funds in order to preserve state spending power in the event of future budget shortfalls. When the corporate tax system is successfully in place and the state is experiencing positive returns, the legislature can then begin reforming other tax systems in a similar manner.

Corporate Tax Rate in Iowa

Iowa currently taxes corporate income in a graduated system, and its top marginal rate of 12% is the highest in the country. This tax bracket was added in 1981, and the rate has not been changed since. As a result, the state has failed to grow corporate investment, while continuing to rely more on corporate tax collections to fund the state budget. The 12% tax rate causes many problems for the state, which all contribute to decreasing revenue and corporate investment. We identify the following problems currently plaguing the state economy:

- In the past 2 years, Iowa has run budget deficits caused by lower-than-projected revenues.
- Of the 44 states that tax corporate income, the average tax rate is 6.08% (2013).
- Iowa currently ranks 41st in revenue collections out of the 44 states that directly tax corporate income.
- Tax incentive policies contribute to the decrease in revenue collections by awarding corporations tax credits that they do not earn.
- 5.1% of the state budget consists of revenue from the corporate income tax.
- Iowa's low population cannot sustain the nation's highest marginal tax on corporations.

The reliance on corporate taxes to fund the state budget, paired with decreasing collections from corporate taxes, has caused Iowa to run budget deficits. Lowering the corporate tax rate will increase revenue collections by increasing business investment in the state, therefore balancing the state budget and eliminating the need for emergency funds to support state spending.

Iowa's tax policy is in desperate need of reform, as multiple years of revenue shortfalls have led to budget cuts and mounting deficits. Corporate taxes have not undergone reform since 1981, when the 12% tax bracket was added to the existing system, while other Midwest states have recently changed their tax rates in response to economic growth. With a 2016 population estimate of 3.1 million [4], Iowa cannot sustain the highest marginal corporate rate in the nation and expect to grow the private sector at an acceptable rate. In order to maximize state revenue and encourage corporate growth within the state of Iowa, the corporate tax rate must be lowered comparable to peer states in the Midwest, and tax incentives should be kept to a minimum in order to capture all corporate tax revenue in the general budget.

3.4 Policy Evaluation

When reconfiguring both personal and corporate income tax structures, the first decision lawmakers must approach is choosing whether to establish a flat income tax or a system with graduated tax rates based on levels of income. Unlike many of its peer states, which have flat corporate tax structures, Iowa has a graduated corporate tax rate with four brackets based on income levels. This system theoretically creates a more equitable outcome for taxpaying companies, allowing smaller businesses to keep a larger portion of their revenue by paying less in income taxes. Graduated systems may result in higher incomes for small businesses, but they are also a disincentive for large corporations to invest in the state. Corporations will be subjected to larger tax liabilities, so they will pursue opportunities in states with lower rates in order to maximize profits.

Flat rates eliminate the disincentive for large corporations to invest by taxing all income at the same rate, regardless of the size of the company. This system enforces process equity, as all companies pay the same statutory rate. Unfortunately, flat taxes disproportionately affect small businesses, by taxing their income at the same level as that of large corporations, despite their marginal size relative to corporate entities. As a result, small businesses experience inequitable outcomes in a flat tax system because their smaller revenues are taxed at the same rate as the millions in revenue from large corporations.

Policy Alternatives

When considering corporate tax reform, there are two policies to consider. The first policy question legislators must answer is which type of tax system to implement:

- A graduated tax system based on levels of income protects small businesses by allowing smaller levels of marginal income to be taxed at lower rates. This system also discourages corporate investment, because their higher marginal incomes will be taxed at a higher rate.
- A flat tax for all levels of income incentivizes corporate investment by taxing all marginal income at the same rate. Small businesses are at a disadvantage under flat tax systems because their income is taxed at the same level as that of large corporations, while their marginal revenues are smaller.

Legislators must also determine which reforms to pursue regarding the statutory tax rate itself:

- Maintaining the current tax rate of 12% would continue to discourage corporations from investing in Iowa; however, it would also continue protecting entrepreneurs who operate small businesses in the state.
- Increasing the corporate tax rate will not only discourage corporations from investing in the state, it will also drive current corporations out of the state. A higher rate will generate more revenue from corporations that continue doing business in the state, although marginal revenue collections will decrease as companies leave.
- Decreasing the corporate tax rate incentivizes corporations to invest in the state, which will increase state revenues when investment outpaces the decrease in taxes. There is the potential for revenue decreases, although it is unlikely a prudent tax cut will dramatically decrease revenue collections.

The policy alternatives outlined above provide a range of feasible manipulations the Iowa legislature can implement when considering tax reform. While we allow variation in specific policy details, all proposals should fit the above alternatives.

While contemplating reform of the statutory corporate tax rate, it is important for legislators to understand the status quo and its current effect on the economy. As it currently stands, the corporate tax structure in Iowa is contributing to annual budget shortfalls. The amount of tax incentives relative to the amount of revenue collected, as well as the budget's reliance on corporate tax revenue, is not sustainable in the years to come if current revenue trends continue. Furthermore, maintaining the current tax structure may not be politically feasible, especially for state legislators who campaigned on the promise of tax reform and balancing the state budget.

Maintaining the current status quo also has some advantages. The Iowa Department of Revenue, which oversees the collection of all state tax revenue, would not have to make any changes. The department would not need any restructuring or staff changes, making the status quo a very administratively feasible policy alternative. Maintaining the status quo would also be acceptable to corporations and businesses who currently benefit from Iowa's corporate tax system, including the credits and incentives that come with the 12% bracketed system.

Legislators may feel that the status quo has failed the state and opt to raise the corporate tax rate in order to increase revenue collections and support the state budget. Raising the corporate tax rate would increase revenue collections from businesses that opt to continue operating in the state, helping cover shortfalls in the state budget and allow for additional government spending to reverse recent funding cuts to public programs. Raising the corporate tax rate would require minor restructuring of the Department of Revenue in order to accommodate the additional revenue inflows and management of the additional tax rate; however, this modification would still be administratively feasible as long as the restructuring does not change the overall operation of the department.

While increasing the corporate tax rate will increase revenue collections from states that continue operating in Iowa in the short run, increasing the nation's highest existing tax rate will also cause larger companies to relocate, and will discourage corporations from investing in the state. As a result of the lower business activity, the state may experience a net loss in corporate tax revenue in the long run, further exacerbating its current revenue shortfalls. Such a proposal would not be politically feasible, as legislators seeking reelection would be hesitant to support policies that raise taxes and decrease revenue. Furthermore, corporate lobbyists would fight the proposal, adding to the political difficulties the legislature must overcome before the measure can pass.

Another response to Iowa's budget crisis is lowering the corporate tax rate to increase revenue collections and encourage businesses to invest in the state. A lower tax rate will attract a wide range of corporate investors looking to expand their companies into new states. The lower tax burden will incentivize these companies to establish locations within the state, leading to increased tax revenue, as well as increased support for local communities. Because 2018 is an election year, many representatives will support lower taxes in order to gain voter support, which increases the political feasibility of the alternative.

Similar to increasing the statutory rate, the Department of Revenue would have no administrative objections as long as the policy does not dramatically alter the structure of their department. When cutting taxes on any entity, there is always a risk of increasing revenue shortfalls. Corporations may take advantage of the lower rate by finding loopholes in the law that allow them to reduce their liability even further than they can under the current program. Furthermore, reducing taxes on corporations may be met with social resistance, a theory we explore when evaluating the policy alternative.

Within all of the previously mentioned policy alternatives, tax credits and incentives factor into the success of any policy action. Tax incentives should be modified in conjunction with the selected statutory policy as a compliment to the alternative, not as a stand-alone policy manipulation. The final policy strategy should include both a manipulation of the statutory corporate tax rate, as well as a manipulation of the existing incentive structure.

While there are many ways to adapt the corporate tax system in Iowa, the aforementioned alternatives provide a base for all feasible manipulations to occur. We now evaluate the three policy alternatives described above on the basis of effectiveness and social acceptability, and attempt to conclude which policy option will best solve Iowa's problem of decreased state revenues.

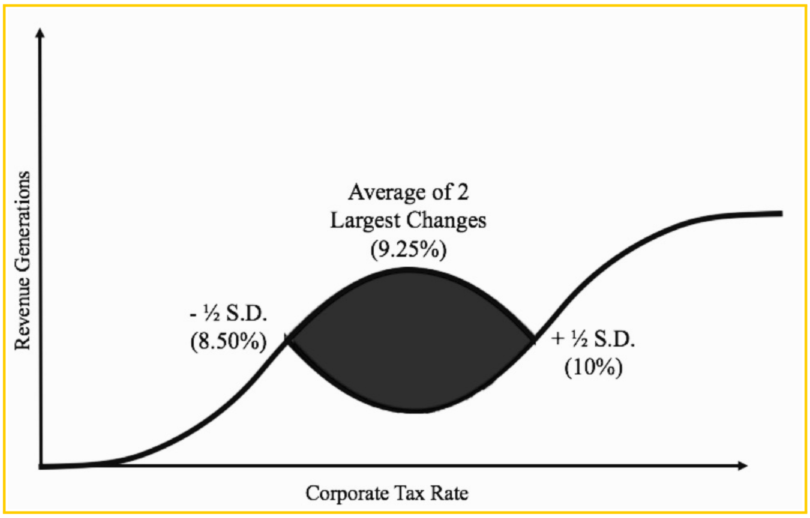
When gauging the effects of various corporate tax rates, we use two evaluative factors to measure the effectiveness of our proposed policy alternatives. The most important evaluation mechanism for gauging the effectiveness of tax reform is the change in revenue attributed to the change in policy. Changes in state gross domestic product are also important to consider when proposing changes to corporate taxes, because a correlation can be made between tax rates and corporate economic output. Because Iowa has not reformed its corporate tax rate since 1981, we opted to analyze the effects of these criteria on other states that have changed their corporate tax rates since 2000. We decided against comparing the effects of changes in other Iowa taxes – such as the increase in the gasoline tax – because these taxes have no direct correlation to one another, causing inaccurate predictions. Finally, we examine the social acceptability surrounding each policy alternative, and attempt to select the optimal policy for the state to pursue.

3.4.1 Revenue

Looking at states that have changed their corporate tax rates or collection structures in the past two decades, a correlation has emerged between a change in tax rates and a change in revenue collections. For states that have increased their corporate tax rate, revenue collections increase to a certain point, before decreasing once the tax rate reaches a certain threshold. States that decrease the nominal rate on corporate income tend to see consistent decreases in revenue collections, although it should be noted that these states typically tax corporate income at lower rates, and the decrease does not lead to increased investment in the state economy.

As an example of the phenomena described above, consider the recent changes made in Kansas

Figure 3.3: Correlation between Revenue Collections and Corporate Tax Rates



Note: In general, when states increased their tax rate they saw and increase in revenues, and vice versa, allowing us to assume a direct correlations between the corporate tax rate and revenue collections. However, in the middle range of the tax scale, the general trend no longer proves true. Within this series of changes, two states reformed their tax rates to much higher levels than other states - Connecticut and Illinois. The average new rate between these two states is 9.25%, which is represented at the midpoint. The pattern of correlation seems to hold true until approximately a half standard deviation from this midpoint. Therefore, we estimate the relevant range of policy alternatives where decreasing the tax rate will increase revenue to be between the rates of 8.5% and 10%.

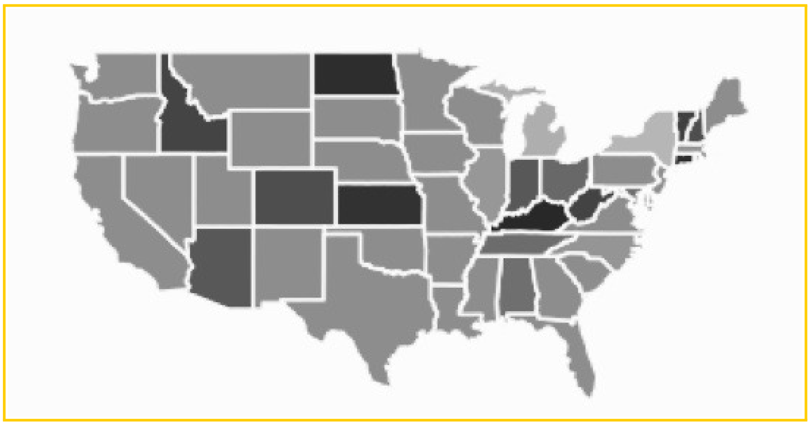
and Michigan. In 2011, New Hampshire raised its corporate tax rate by 1.05%, to a nominal rate of 6.00%. As a result, the state generated over $100 million in additional revenue from corporate taxes. The results in Michigan represent that when the corporate rate increases, states collect increased revenue from corporate taxes. Meanwhile, Kansas lowered its top tax on corporate income by a mere 0.3% in 2008, bringing the rate to 7.05%. This change decreased the state's revenue collections from corporate taxes by more than $150 million (2007, 2009, 2010, 2012). The results in Kansas represent that when the corporate rate decreases, revenue collections decrease as well.

The results described above are not by any means constant. Some states have increased their tax rates, only to see large declines in corporate tax revenue. By analyzing similar changes in tax rates and revenue collections in other states, a pattern of correlation begins to emerge, which can be seen in Figure 3.3 below.

As Figure 3.3 illustrates, the correlation between tax rates and revenue generations are assumed to be a direct correlation; that is, as the tax rate increases, revenue collections increase, and vice versa. However, this pattern is only true for tax rates that lie on both the high and low ends of the tax scale. By finding the mean of the highest tax rate of states with recent reforms (Illinois 9.5% and Connecticut 9.00%), we calculated $\frac{1}{2}$ of a standard deviation, and assume this to be the relevant range of tax rates where there is no significant correlation with revenue collections. In this range, increasing or decreasing the corporate tax rate will not automatically lead to similar results in revenue collections.

Keeping in mind this distribution of tax rates and revenue collections (denoted by the peak of 9.25% and $\pm\frac{1}{2}$ S.D.), we analyze the three policy alternatives of maintaining, increasing, and decreasing the corporate tax rate in Iowa. The current rate of 12% lies well beyond the upper bound of 10% in Figure 3.3. The state is currently running a budget deficit, partly contributable to revenue shortfalls from corporate taxes, and the state's reliance on this income. Maintaining the current rate

Figure 3.4: Changes in State GDP Following Corporate Tax Reform



Note: Data compiled by the United States Bureau of Economic Analysis using the Federal Reserve Economic Database [3]. Change in Real GDP is measured by subtracting GDP in the year following tax reform to GDP in the year prior to tax reform. Darker shadings represent smaller increases (or decreases) in GDP, while lighter shades represent larger increases in GDP based on tax reform. The scale ranges from a $34 million decrease in GDP to a $133 million increase.

of 12% would not shift the state either direction on the correlation chart, meaning state revenue collections would not benefit from the status quo, but the risks of policy failure are low.

Because the 12% rate is currently 2% higher than the $+\frac{1}{2}$ standard deviation level in Figure 3.3, increasing the corporate rate further runs the risk of driving businesses out of the state, and decreasing revenue collections as a result. If the higher tax rate does not drive down revenue collections, they will remain relatively similar to their current levels, with the possibility of only slight increases in the years immediately following the change. The risks of such a policy are high, while the benefits of slight revenue increases are relatively low when compared to the possible losses.

Decreasing corporate taxes pushes the nominal rate closer to the center of the correlation chart, which increases the likelihood of the state collecting higher revenues from corporate taxes. The lower rate may incentivize companies to invest in the state economy, leading to rapid business growth and development, contributing more funds to the state budget in the form of corporate income taxes. Lowering the corporate rate runs a small risk of decreasing revenue collections, especially if the rate is decreased beyond the relevant range described in Figure 3.3. However, the potential benefits outweigh the potential losses, making a corporate tax decrease a feasible policy alternative based on sheer revenue collections.

3.4.2 Productivity

In addition to changes in revenue collections, corporate investment in a state economy has the ability to alter the state's productivity, measured in GDP. Figure 3.4 outlines the changes in productivity in all states that have reformed corporate taxes since 2000. Generally, states have observed increases in state productivity in the year immediately following a corporate tax reform, regardless of the type of change implemented. However, there have been four occurrences since 2000 where state productivity decreased following a change in corporate taxes.

Figure 3.4 shows that only North Dakota, Connecticut, Kansas, and Kentucky saw decreases in state GDP the year following a major corporate tax reform. When determining whether the reform contributed to the decreased productivity, we concluded that in both Kansas and Kentucky, the economic recession of 2008 was the contributing factor, not corporate tax reform. With both reforms happening in 2008, the onset of the recession would have been forcing businesses to decrease production and lay off employees, leading to a lower GDP in 2009. We have discovered no plausible explanation for the productivity decreases in North Dakota or Connecticut, and will operate under the assumption that tax reform of any kind generally increases state productivity.

Because there is a correlation between tax reform and state productivity, maintaining the current tax rate on corporate income would neither encourage nor discourage corporate investment in Iowa. As a result, the state's GDP would remain relatively constant, barring any economic events that dramatically affect state productivity. The status quo is a safe policy alternative for a state that is experiencing high levels of current output; however, it is not a viable option for states such as Iowa that are looking to increase corporate investment in its economy.

Evaluation Criteria

Given the policy alternatives of maintaining the status quo, increasing corporate taxes, and decreasing corporate taxes, we begin our evaluation by looking at changes in state revenue collections:

- Maintaining the current status quo does not have any impact on state revenue collections. The current policy is contributing to the budget deficit, meaning continuing the current policy is unlikely to have a positive impact on the state economy.
- Generally, there is a direct correlation between tax rates and revenue generations. Therefore, increasing the tax rate will increase revenue generations from corporate taxes, and vice versa. However, there is a range of tax rates where this correlation is relaxed, and revenues can increase as a result of a lower tax rate (see Figure 3.3).

We also evaluate the effectiveness of each policy alternative based on its impact on state productivity, measured by Real GDP:

- When states have reformed their corporate tax rates, they generally see increases in state productivity. We attribute these increases to changes in corporate behavior, but do not have data to support this assumption. Because the tax code must be reformed to observe a change in GDP based on corporate tax rates, maintaining the status quo is not a feasible option for states that wish to maximize productivity.

Finally, we evaluate the social acceptability of each policy alternative:

- Increasing the corporate tax rate is the most socially acceptable policy alternative, because a majority of Americans support increasing taxes on corporations, while only 24% support a tax cut. Maintaining the status quo would provide a semi-feasible alternative, while tax cuts will raise social opposition.

Evaluating the policy alternatives based on changes in revenue and GDP, as well as on social acceptability, provides lawmakers with an objective analysis when selecting a policy to implement in Iowa.

Both increasing and decreasing the corporate tax rate seems to have a positive impact on state productivity, making both alternatives viable options for states looking to increase corporate activity. When increasing the tax rate on corporations, the tax burden is passed to consumers through higher prices on goods and services. These higher prices then contribute to consumption spending, driving the GDP increase we observe following increases in tax rates. Therefore, while increasing the tax rate increases GDP, it may not directly increase productivity. When the rate is decreased, corporations have increased spending power to invest in new employees and updated equipment, which increases the state GDP and adds to overall productivity.

In addition to evaluating policy alternatives on effectiveness, it is also important to compare them on the basis of social acceptability. A September 2017 poll conducted by the Pew Research Center found that a slight majority of Americans (52%) support raising taxes on large corporations, while only 24% support decreasing the corporate tax rate [11]. As a result, any attempt to modify the corporate tax rate in Iowa will draw criticism from unhappy citizens and increase the political division our state and country are currently experiencing.

Maintaining the status quo and keeping the current tax rate is likely to draw the least criticism. Because Iowa currently has the highest nominal rate in the country, those who believe corporations should be taxed more are unlikely to create a political scene over the failure to raise the rate further. Those believing the rate should be lowered will still deem a status quo policy unacceptable, and lobby for other tax cuts if the corporate rate remains the highest in the country.

Increasing the corporate tax rate may draw the least ire from citizens who believe the rate is not currently high enough; however, it will draw criticism from corporations who currently pay the 12% Iowa tax. Decreasing the rate will draw extreme indignation from citizens, while pleasing the corporations operating in the state. Both reform alternatives will increase the involvement of corporate lobbyists, and create an environment of economic warfare between Iowans and corporations.

Evaluating our policy alternatives based on social acceptability, as well as the effectiveness measures of revenue collections and changes in state productivity, allow us to examine the costs and benefits associated with each alternative in order to make an informed proposal that will benefit the state economy. After comparing the proposed alternatives to the results from recent changes in other states, we have successfully exhausted our evaluation criteria, and outline our policy recommendation based on these criteria in the following section.

3.5 Policy Recommendation

Although this year's budget gap of $14.6 million was a far cry from the $104 million projected shortfall in July 2017, the state is anticipating another tough budget year in 2018. With tax revenue in such a precarious state, it is unwise to continue using a tax system that is failing the state economy. The legislature should pursue prudent reform on corporate taxes to increase the possibility of recouping lost revenue from past years, or at the very least, prevent another round of budget shortfalls and spending cuts.

The graduated system businesses experience today has been in effect for over 30 years, and it is unlikely that an effort to return to a flat tax system would gain political support from legislators. In addition, a return to a flat tax system while simultaneously making large changes to the statutory may overload the economy and contribute to even higher budget deficits in the future. As a result, we recommend maintaining the current bracketed tax structure, and looking only at the tax rates which make up those brackets. With this result in mind, we look at the evaluation criteria used to gauge our policy alternatives.

While we find that maintaining the current bracketed tax structure with four graduated levels of income is ideal for simplifying the reform, we do not recommend continuing the status quo rates that currently apply to those income levels. Some state officials may be inclined to support the status quo and lobby against any modifications to the corporate tax rate because of the disadvantages faced by both increasing and decreasing the statutory rate. However, the status quo has failed the state since its inception in 1981, contributing to the massive budget shortfalls in recent years.

Increasing the corporate tax rate offers the most promise in terms of social acceptability; however, social acceptability does not run the state economy. The current 12% rate is already the highest in the nation, and increasing this rate further would drive business out of the state and cause the budget deficit to increase each year. While such a policy may boost GDP in the state, the increased productivity measure does not outweigh the lost revenue in corporate tax collections. Lowering the corporate tax rate may incur social challenges from citizens who have an unfavorable view of corporations; however, the alternate also offers many economic benefits while reducing risk. After reviewing the evaluation criteria, we recommend that the Iowa Legislature lower the corporate tax rates of each of the existing tax brackets, while still retaining the four-tier tax structure.

Although both raising and lowering the tax rates have a positive impact on state productivity, we contend that lowering the tax rate will lead to a greater economic by incentivizing companies to conduct their business in Iowa, resulting in more economic growth and leading to more income that can be taxed for revenue collection. In order to determine the optimal corporate income tax rate, we return to the correlation chart depicted in Figure 3.4.

Policy Recommendation

After evaluating our proposed policy alternatives based on changes in revenue collections, changes in state productivity, and the qualitative measure of social acceptability, we recommend the following policies be implemented:

- The current graduated tax system with four income brackets should be left in place. Modifying the tax structure and rates simultaneously may overburden the economy, increasing the likelihood of decreased revenue collections.
- The bottom two tax rates of 6% and 8% should not be changed. These rates currently lie below the relevant range on the correlation curve. While increasing these rates would likely increase revenue collections, an increased burden would also be placed on small businesses who benefit from the lower rates.
- The current 10% rate should be decreased to 8.5%, bringing it to the bottom of the relevant range in the correlation curve. Reducing the tax rate within the relevant range will have a positive impact on revenue collections because the direct correlation does not exist within this range.
- The current 12% rate should be lowered to 9.5%, bringing it within the upper third of the relevant range. Currently, the rate lies well outside of the range, meaning that revenue collections will almost certainly be increased as a result of the rate change.
- In order to monitor progress, the reform should be rolled out over a period of three years. Such a timeline would allow the legislature to make necessary changes in order to perfect the policy once it is implemented.

Reducing the statutory corporate tax rate while maintaining the current graduated tax system will incentivize new corporate investment in Iowa and continue to protect small businesses. As a result, the state will see increased revenue collections, and return to balanced budgets without the need for millions of dollars in emergency funds.

Currently, Iowa's top tax level lies well above the upper bound of the box at 12%, while the 10% level is equal to the maximum rate allowed within the relevant range. In order to bring both of these rates within the relevant range of acceptable rates where a decrease in the statutory rate will lead to an increase in state revenue, we recommend that Iowa reduce the top two tiers to 8.5% and 9.5%, respectively. As a result, the state will see rising corporate investment, boosting productivity and increasing the amount of taxable income generated by corporations.

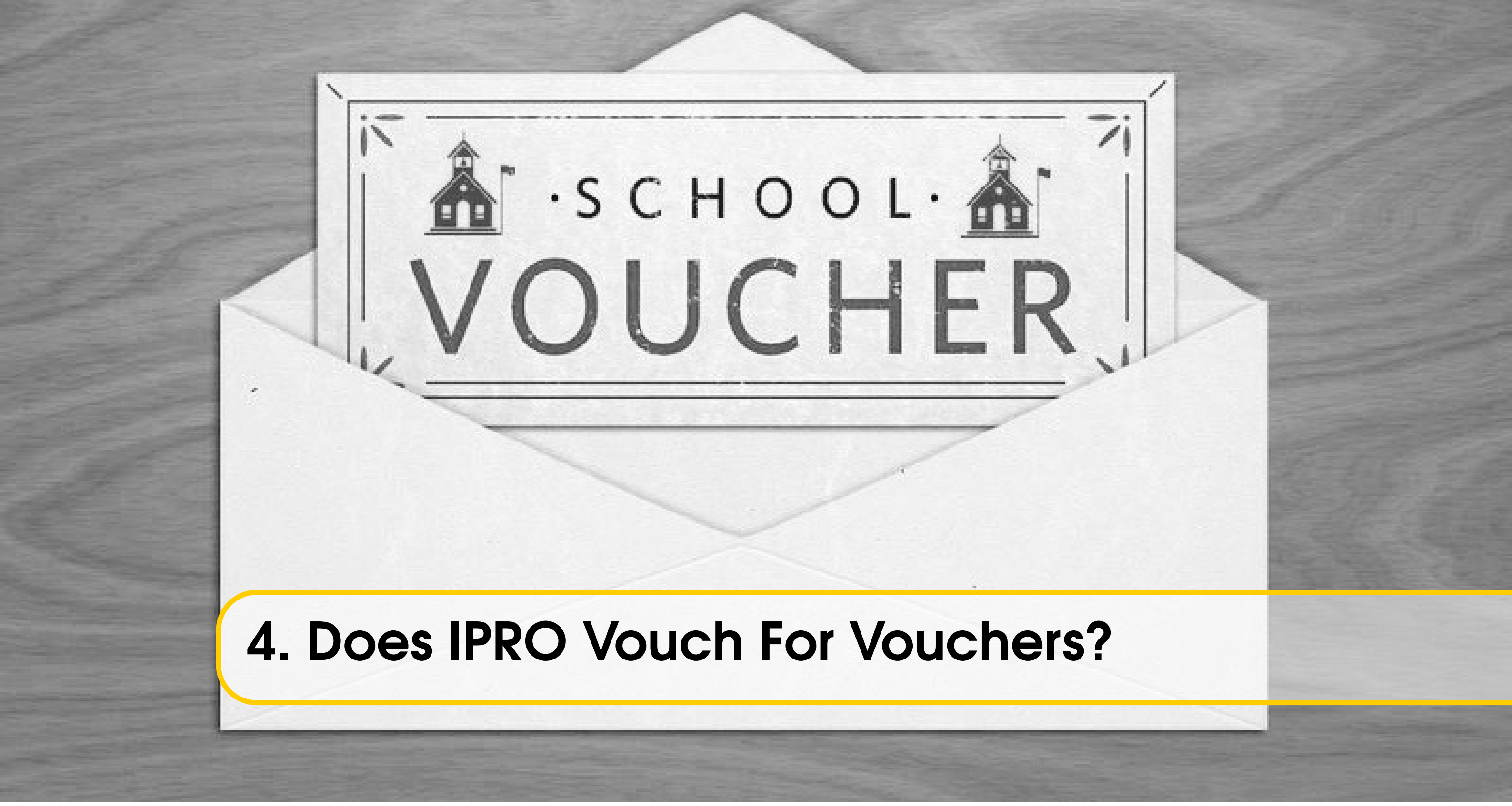
Such a drastic change in public policy may not be politically feasible in one policy manipulation. Rather, to ensure the success of decreasing the corporate tax rates in Iowa, we recommend making incremental changes over a period of three years. The result will allow legislators to monitor the progress of the policy, and make any necessary changes. Consequently, a soft rollout of the tax policy minimizes the financial risks to state revenue collections, by allowing changes in revenue to happen gradually, rather than one large sudden shock to the state budget.

In regards to the bottom two tiers of Iowa's corporate tax structure, we find that these levels are sufficient, and do not recommend any changes. Because these rates lie below $\frac{1}{2}$ of a standard deviation from the peak in the correlation chart (Figure 3.4), any decrease in these rates would likely lead to a proportional decrease in state revenue. Additionally, it is important to note that although we suggest changing the top tax rates within the bracketed system, our recommendations retain the same income level thresholds for each of the corresponding brackets.

In order to ensure that the lower tax rates are effective in increasing state revenue collections from corporations, the state may also consider modifying the tax incentive structure that allows corporations to hold over unused tax credits for use in future years. We do not propose any specific changes to this system, although we do recommend a full analysis into the effects of these incentives and how they would coincide with our policy recommendation.

With tough fiscal decisions ahead and the constant uncertainty of the economy, measures must be taken to ensure that the State of Iowa has sufficient revenue to fund its spending. As the state has not altered its corporate income tax system in nearly four decades, Iowa's corporate tax system is in desperate need of reform in order to return the state to its prosperous economic condition and replenish the state's emergency funds that have been depleted by the recent budget shortfalls. Additionally, the increase in tax revenue will allow the state to increase funding to critical public programs, such as education and public safety.

Decreasing the top two levels of the corporate tax rate in Iowa to 8.5% and 9.5%, respectively, places the state in closer competition with nearby states, and brings the tax rates into the relevant range of the correlation chart where revenues increase as the tax rate decreases. With this change, Iowa will be able to meet its budgetary needs without creating an undue hardship on businesses. We are confident that our findings will bring more corporations to the state of Iowa, and the state will once again return to its tradition of strong fiscal responsibility and balanced state budgets.



4. Does IPRO Vouch For Vouchers?

4.1 Executive Summary

Whether it is how to fund K-12 and higher education, questions on state curricula, or voucher programs, there has been no shortage of controversy surrounding issues on education in the state of Iowa. In this paper, we specifically look at **school vouchers** and **education savings accounts**. The former are available to families who meet certain requirements (often income level, students with disabilities, and other related factors qualify families), whereas the latter are open to all families. Each policy was evaluated using three criteria – *effectiveness*, *equity*, and *legality* – **ultimately we conclude neither would be a good fit for the state of Iowa.**

For **effectiveness**, we found the following:

- *School Vouchers*: Using vouchers, and in some cases simply the option of using vouchers, leads to higher graduation rates and thus, is deemed effective.
- *Education Savings Account*: Although there is no specific precedent of ESAs, it is reasonable to expect similar outcomes to those observed in the Voucher Program. It is deemed effective.

For **equity**, we examined the State of Indiana's Voucher Program. Ultimately, we found the following:

- *School Vouchers*: We found there are significant racial and geographic disparities in the state of Indiana's voucher program. Additionally, discrimination against LGBTQ students is a concern.
- *Education Savings Account*: We predict the challenges that face school vouchers will be exacerbated in the Education Savings Account. This is due to many factors which are discussed in the paper.

For **legality**, we examined relevant legal precedents governing either school vouchers or education savings accounts. Ultimately, we found the following:

- *School Vouchers* and *Education Savings Account*: Although not strictly illegal (indeed, vouchers to sectarian schools specifically are legal under current case law), numerous Federal and State court cases, as well as existent anti-discrimination law, complicate the legality of school vouchers and the Education Savings Account in the State of Iowa.

Iowa has some of the best public high school graduation rates in the country. School Vouchers and the Education Savings Fund options threaten the public education funding and have the potential to increase racial and geographic disparities. Additionally, serious legal questions increase the risk of implementing both options.

It is for these reasons and others that we recommend the state of Iowa should focus on public education instead of attempting to implement either a Voucher or Education Savings Account Program.

4.2 Introduction

While undoubtedly important, school education funding is a politically charged topic. Most folks in the state of Iowa recognize the importance of education. However, there are debates on the best approaches to funding it. There has been recent buzz within the Iowa legislature about exploring alternatives to the current education funding system. These alternatives would allow students in Iowa to attend private school institutions at a reduced tuition cost by providing families with education grants. Others contend that these alternatives are not worth the possible harm it would cause. Education policy understandably evokes a lot of genuine emotion; this analysis attempts to remove emotion commonly attached to this issue and look objectively at possible ways to fund education in Iowa.

Policy Alternatives

Option 1: Status Quo This option would stick with the current funding structure we have and continue to focus on improving public schools.
Option 2: School Vouchers This option would give low-income and/or students with disabilities a grant equivalent to the portion of the state per-pupil funding per year that can be used to attend a private school.
Option 3: Education Savings Account This option is similar to Option 2; however, every family is eligible for the grant, not just low income and special needs.
Criteria:

- *Effectiveness* – We evaluate effectiveness by examining standardized test scores, and graduation rates.
- *Equity* – Our evaluation of equity depends on the proposal. This is partly due to the data available. For Option 1, we evaluate graduation rates for different racial groups. For Option 2, we conduct a case study on the state of Indiana's Voucher Program. We evaluate whether the program in Indiana is racially and geographically equitable. Option 3 is difficult to evaluate due to a lack of data. However, we use existing data to try and predict an analysis of equity for Option 3.
- *Legality* – We evaluate legality by examining past court cases and legal precedents, particularly when it comes to legal questions about School Vouchers and Education Savings Accounts.

In this paper, three different potential policy proposals were evaluated. The first policy is "Status Quo/Focus on Public Education." This policy proposal is remaining with the structure we have today in the state of Iowa. The "School Vouchers for Qualifying Students" is a proposal similar to ones that several states throughout the country have. In our proposal, we evaluate a proposal where the state of Iowa would give certain students a grant equivalent to the portion of the state per-pupil funding per year that can be used to attend a private school. The eligible students in this proposal would be students who are low-income and/or students with a disability. This grant can be used for private school tuition, tutoring, textbooks and other education related funds. Any unused funds can be used for tuition at any college or university in the state of Iowa. The "Education Savings

Account" is similar to the “School Vouchers for Qualifying Proposal," but it differs in a key way: every family, regardless of income or ability status is eligible for the grant.

This paper consists of two main sections. The first section contains an analysis of the criteria, and how each of the proposed policies performs under the different criteria. Included in this section is how we define the criteria. The second section provides a summary of the information in the first section and our policy recommendation.

4.3 Policy Evaluation

4.3.1 Effectiveness

Measuring effectiveness is showing that a policy positively effects education outputs in Iowa. A positive impact can be measured by high or increased performance in four-year high school graduation rates. Another positive effective impact would be above average or increased test score performance. To show a policy’s effectiveness or lack thereof, we examine and measure graduation rates and test scores and find trends associated within three proposed policies: continuing the current status quo, implementing a school voucher program, or implementing an education savings account program.

Status Quo

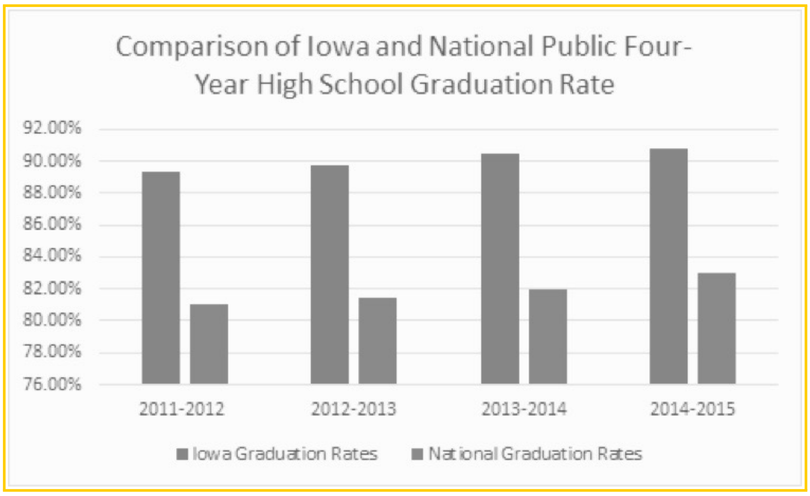
In order to evaluate the effectiveness of Iowa’s current education policy without voucher or education savings account programs, we compared Iowa’s average public four-year high school graduation rates with the nationwide average. We looked solely at public school graduation rates because private institutions are not required to report graduation rates, and thus, private school data was inconclusive. Our data is from the National Center for Education Statistics[9]. Shown in Figure 4.1, one can see that Iowa consistently performs well above national average. In all the school years evaluated in this table, 2011-2012, 2012-2013, 2013-2014, and 2014-2015, the state of Iowa reported the nation’s highest high school graduation rates. Also, when looking at the demographic breakdown of graduation rates, Iowa still outperforms the national averages in every racial category. For Black students, Iowa ranks in the top 15. For Hispanic students, Iowa has the 6th highest rate. For students that are deemed economically disadvantaged, Iowa is ranked 7th in the nation. Here, it is proven that Iowa Public Schools are preforming well in comparison to national standards, and thus, students are likely to receive a high school diploma within Iowa’s current education programs.

School Vouchers

For effectiveness, there are many ways to measure what it means for a program to be successful. Depending on what criteria is used to measure effectiveness, an analysis yields different results. For example, if, by “effectiveness" we strictly look at standardized test scores, the research is largely inconclusive. This will be explored later. Another definition of effectiveness could be graduation rates. While the amount of research on this is relatively small, there are some studies to suggest that school vouchers are helpful in increasing high school graduation rates amongst lower income students, which in turn, increases chances of life success later on. There will be more analysis on this later on in the paper.

It is important when interpreting the statistics is to avoid making definitive, causal statements. For example, the average high school graduation rates for public schools for states that offer vouchers is 83.33% versus an 83.4% high school graduation rate for states that do not offer a voucher program (See Table 4.1). These two graduation rates are not statistically significant, rendering the following analysis somewhat irrelevant for this particular statistic. Nonetheless, it is important to note that even if these two percentage rates were drastically different, this alone does not prove causation. Let’s assume for states that offered vouchers, the average graduation rates for public high schools are 90%, and for states that did not offer vouchers, the average graduation rates

Figure 4.1: How does Iowa's public four-year high school graduation rates compare to the National average?



Note: This table includes data for National and Iowa public high school graduation rates for the 2011-2012, 2012-2013, 2013-2014, and 2014-2015 school years. This data is taken from the National Center for Education Statistics [9].

for states that did offer vouchers are 70%. To conclude that state vouchers are the reason for low graduation rates would be premature. It is reasonable that states with a low graduation rate decided to implement a statewide school voucher program.

Table 4.1: How do public school graduation rates for low income students compare to overall graduation rates in states with and without statewide voucher programs?

	Average Overall Public HS Graduation Rates	Average Public HS Graduation Rates for Low Income Students
Statewide Voucher Program	83.06% (n=16)	76.31% (n=16)
No Statewide Voucher Program	83.53% (n=34)	75.029% (n=34)

Note: This table indicates public high school graduation rates for overall population, as well as for low income students, and whether a statewide voucher program is offered. The unit of observation is the state. N=16 means that there are 16 states that have statewide voucher programs. The data were taken from 2014-2015 school year. `https://nces.ed.gov/programs/digest/d16/tables/dt16_219.46.asp`

When it comes to evaluating effectiveness based off of high school graduation rates of public schools, Table 4.1 suggests that there is relatively no difference between states with voucher programs and states without voucher programs. However, one key question is left out when evaluating Table 4.1: what happens when examining low income students? That is, although at a macro-level the data suggest little differences in terms of graduation rates, the data do not suggest whether it is the case that states with a voucher program have a smaller gap in graduation rates between the overall student population and students with low income. This analysis would help control for the differences in states. This analysis is shown in Table 4.2.

Table 4.2: How do graduation rates compare between states with and without statewide voucher programs?

	Average Difference in Graduation Rates for Overall Students and Low-Income Students
Statewide Voucher Program	6.75% (n=16)
No Statewide Voucher Program	8.588% (n=34)

Note: A lower percentage means that the gap between overall graduation rates of public schools and graduation rates for low income students is smaller. Despite the slight decrease in achievement gap, the two values are not statistically significant.

Table 4.2 indicates that, holding states constant, the average difference between the graduation rates of the overall population and graduation rates of low-income students with regards to whether the state offers a statewide voucher program are 6.75% for states with a voucher program and 8.59% for states without a voucher program. Ultimately, the goal in terms of education policy is to increase graduation rates for all students; ideally, there would be no gap between low income students and the general population.

One important note and limitation to this discussion on high school graduation rates is that it only focuses on public school graduation rates. Data for private school graduation rates are difficult to find. While the fact that we look solely at public high school graduation rates is certainly a limitation, it does not render the data useless. For example, referring to Table 4.2, the small difference in rates could be attributed to the use of a voucher by at-risk students going to private schools. This is plausible because several studies have shown a link between exposure to voucher schools and increase in graduation rates. In a study that focused on Milwaukee's voucher program, conducted by researchers from Fordham University, University of Wisconsin Madison, and University of Arkansas, it was found that graduation rates for those who attended a voucher school in 8th or 9th grade were more likely to graduate high school as well as go on to a 4-year college (Cowen et al 2013). The researchers controlled for factors such as race, income, living situation, and early test scores.

Similarly, researchers from the University of Arkansas and Georgetown University did a case study of the Washington DC area. In this study, a scholarship that given out by a lottery system, and those who won it were able to use that money to go to a private school. The researchers found that the graduation rates for students who used the scholarship has a 21 percentage-point increase than those who were not offered a scholarship (Wolf PJ et al 2013). Even if a student was offered a scholarship and did not take advantage of it, those who were offered had a 12 percentage-point increase in graduation rates. Interestingly enough, this study also found modest and uneven gains in standardized testing scores. This finding, that voucher schools and public schools perform relatively similar on standardized testing, is consistent with many other studies done – in other words, the results are largely inconclusive on this measure of effectiveness.

There are several limitations to these studies and their findings. In the first study, many of the students who started off in voucher schools for the study eventually went back to public schools since there are significantly less amounts of private schools at the high school level than there are for k-8 levels. This fact somewhat undermines the claim that voucher schools are responsible for increasing graduation rates and increasing rates of college attendance. However, such claim is not made. It is merely the claim of the researchers that exposure to voucher schools is linked.

In the second study, generalizability is a key concern. Washington DC is vastly different from Des Moines, IA, let alone the entire state of Iowa. While this is true, that does not completely undermine the value of the results. The researchers found that exposure to smaller class sizes, and a more welcoming school environment where good academic habits were formed as well as motivation was fostered were some factors in why voucher schools outperformed public schools in terms of graduation rates and college admission rates.

The analysis for effectiveness thus far has focused on voucher programs. This is because there are very few states who have an education savings fund program implemented, where every family in the state is offered a certain amount of money to be used wherever they would like. Instead, of the states that do have a voucher program, almost all of them have certain requirements, such as being below a certain income level or having a student with a disability.

Education Savings Account

There are several ways to measure the effectiveness of an educational policy, including national graduation rates and test scores. It is helpful to compare the successes or failures of a program in a state that has already implemented similar policy with Iowa's educational stage. However, there is currently no state with an implemented Education Savings Account (ESA) policy.

An Education Saving Account policy would create a method for providing all Iowa students, regardless of socio-economic status, ethnicity, or residence, with tuition assistance at private school institutions. In order for the money provided by the ESA to be an effective investment, the students who take advantage of the money in the ESA would have to show a greater likelihood of graduation and also higher test scores than students who did not use the account's funds and attended a public school within the state of Iowa.

> Effectiveness of Policy Alternatives
>
> **Option 1: Status Quo/Focus on Public Education** Iowa's public education system is top preforming nationally. This is true even when accounting for both race and economic disadvantages. Iowa currently has the highest public high school graduation rate in the nation. Iowa's current education system is effective in regards to graduation rates.
> **Option 2: School Vouchers for Qualifying Students** Using vouchers, and in some cases simply the option of using vouchers, leads to higher graduation rates and thus, is deemed effective. Test score evaluation proved inconclusive, for private schools are not required to report this data.
> **Option 3: Education Savings Account** Option 3 is proven effective, for, although there is no specific precedent of ESAs, it is reasonable to expect similar outcomes to those observed in Option 2.

It is reasonable, given the lack of ESA specific data, to look at effectiveness of vouchers within states that currently provide them. While voucher programs are currently only provided to students that meet certain criteria, such as family income and the ESA would be available to all, it is still fair to assume both would still show similar effects of performance. Mentioned above when evaluating for voucher program effectiveness, simply exposure but not use of the voucher led to higher graduation rates in some cases. However, there was little proof that the voucher programs led to high standardized test performance. Both are important factors in measuring an education policy's effectiveness. It is likely an ESA would provide similar outcomes to vouchers, but on a larger scale, as more students would have access to tuition assistance in order to attended private schools in Iowa.

4.3.2 Equity

For the purposes of our analysis, we define equity in terms of outcomes equity. This is akin to asking the question, "are the outcomes of different student populations groups equitable with regards to the outcomes?" For our analysis, we choose to focus on two different branches of equity: racial equity and geographic equity. Racial equity looks at whether different races perform equitably, depending on the measure at which we are looking. Geographic equity refers to whether urban, suburban, and rural students have equitable outcomes. The "outcomes" we choose to focus on differ for each policy proposal we are evaluating. Our analysis is somewhat limited due to whether data availability.

For example, for the Status Quo/Focus on Public Education proposal, we look at graduation rates with respect to race. An analysis of graduation rates regarding geographic location is unfortunately difficult due to the data not being readily available. For the racial analysis, the goal is for each group to have the same graduation rate (ideally, 100%).

The analysis on equity will be slightly different for the school vouchers and education savings account proposals, given the difficulty of obtaining data on graduation rates for private schools. In these proposals, we choose to define equity in terms of usage of the voucher program is equitable by race and geography.

Status Quo/Focus on Public Education

In this section, we choose to focus on four-year graduation rates of public high school students with respects to race. It is true that Iowa public schools tend to outperform other states' public schools in terms of graduation rates for different racial identities. This was discussed earlier in the "Effectiveness" section. However, Table 4.3 shows that every single race, relative to whites, had lower graduation rates. This suggests that our current racial equity in outcomes with respect to graduation rates is inequitable. Unfortunately, that data on graduation rates by geographic location is not readily available.

When evaluating equity for public schools it is important to remember that public schools serve every student eligible to attend. Public schools do not discriminate against any student – including racial minorities, LGBTQ individuals, or students with disabilities. These students are more likely to face barriers when attempting to attend a private school. Additionally, this also results in public schools having not just an increase in the sheer number of students to serve, but also an increase in the diversity of students. This greater diversity results in an increase in required resources needed to ensure equitable success for students.

Case Study: Indiana's School Voucher Program

To evaluate equity for the voucher program, we define it in terms of whether there would be differences in certain demographics that take advantage of the school vouchers. While it is obviously impossible to know the exact usage rates given that neither of those two options are available to Iowans currently, we do have data on Indiana's voucher program. Indiana has one of the largest statewide voucher programs in the country. Several important factors are at play in terms of equity – determining whether there are disproportionate rates of usage regarding race and location is central to this discussion. Additionally, there will be a brief discussion on equity in terms of whether private religious schools discriminate against LGBTQ students. Table 4.4 shows data from two sources: the US Census Bureau and the Indiana Department of Education. This information shows the relative proportion of the various racial demographics of Indiana children in poverty with the participation rates of the school voucher program.

In terms of our definition of equity, we expect that the percentage of students from a certain race who participate in the state voucher program is proportionate to their representation in poverty. For example, since kids who are black comprise about 23% of all kids in poverty, we expect to see black students comprise roughly the same percentage of all kids who use a voucher. As shown

Table 4.3: What percentage of various ethnic and racial groups graduate from public schools?

Race	Total Number of Students in Public School	Total Number of Students Graduating in Four-Years	Four-Year Graduation Rate
American Indian	1,905	1,535	80.6% ****
Black	30,298	24,148	79.7% ****
Asian	12,687	11,609	91.5% ****
White (non-Hispanic)	391,449	363,656	92.9%
Hispanic/ Latino(a)	54,170	45,774	84.5% ****
Multiracial	19,186	16,097	83.9% ****
Native Hawaiian	1,237	1,090	88.1% ****
TOTAL	**510,932**	**99.98%**	**NA**

Note: Levels of significance are reported as follows: p<.10 (*); p<.05 (**); p<.01 (***); p<.001 (****). Data taken from Iowa Department of Education. Data collected for the year 2016. `https://www.educateiowa.gov/graduation-rates-and-dropout-rates#Four-year_Graduation_Rates`

Table 4.4: Are the participation rates in the Indiana voucher program for various racial groups proportionate to the proportion of students in poverty?

Race	Total Number of Kids Aged 6-17 Below Poverty Line in Indiana	% Represented	Total Number of Participants	% of all participants
American Indian	954	.448%	44	.13% ****
Black	49,462	23.242%	4,317	13.21% ****
Asian	3,372	1.584%	478	1.46% *
White (non-Hispanic)	112,106	52.678%	19,888	60.85% ****
Hispanic/ Latino(a)	33,479	15.732%	5,954	18.27% ****
Multiracial	13,120	6.165%	1,981	6.06%
Native Hawaiian	321	.151%	24	.07% ****
TOTAL	**212,814**	**100%**	**32,686**	**100%**

Note: Data for the first two columns were taken from the American Census Bureau, tables B17001B-E,G-I. Data for the 2015/2016 school year. The data in the 3rd and 4th columns is collected from the Indiana Department of Education. The percentage in the final column indicate the representation amongst all participants of the Indiana Choice Scholarship. Levels of significance are reported as follows: p<.10 (*); p<.05 (**); p<.01 (***); p<.001 `https://www.doe.in.gov/sites/default/files/choice/2015-2016-choice-scholarship-program-report-final-july-update.pdf`

by the data, the rates of participation with regards to race, when considering the population and poverty rates, indicates a disproportionate amount of whites being recipients of the School Choice Scholarship. Despite making up just over half of the child aged population in poverty, whites constitute over 60% of the recipients of the scholarship. Blacks seem to be the biggest losers in terms of proportionate representation – their representation amongst recipients is only 13.21%, even though they represent nearly a quarter of children in poverty.

To be fair, the poverty cutoff is not the same as the income requirements of the School Choice Program in Indiana. Their income cut-off is that the individual is a member of a household with an annual income of not more than one hundred fifty percent of the amount required for the individual to qualify for the federal free or reduced-price lunch. Another possible explanation for the disparity is that whites are more likely to apply for the scholarship. While this may very well be the case (data on applications is not available), this does not change the fact that there are disparities.

Additionally, in order to qualify for a voucher in the first place, the student must be admitted to a private school. Only after admittance can the family apply to receive a voucher. Given lower economic status, it is probable that application processes could become a barrier when considering the time to apply and the uncertainty of being selected to receive the voucher funds. Data on whether private schools admit people or deny people based on race (or any other reason, for that matter) is not available. This means that it could be the case that the reason why there are disparities is due to the nature of private schools. Private schools are able to discriminate without public scrutiny. One way in which private schools exercise this is through their refusal to admit students due to students' sexual orientation or gender identity. For example, Light House Christian Academy in Indiana states in its handbook that it reserves the right to "refuse admission of an applicant or to discontinue enrollment of a student" due to the following behaviors: "Homosexual or bisexual activity or any form of sexual immorality (Romans 1:21-27; I Corinthians 6:9-20); Practicing alternate gender identity or any other identity or behavior that violates God's ordained distinctions between the two sexes, male and female (Genesis 1:26-27; Deuteronomy 22:5)..."

Indiana's School Voucher Program

The state of Indiana has one of the largest voucher programs in the nation. There are several requirements to participate in the program.

(1) You must be accepted into a private-school. This increases the chances of inequitable results – private schools are not regulated and can thus discriminate in any way they wish. Many Christian schools do not allow LGBTQ students, for example.

(2) You must be under a certain income level.

(3) You must meet at least one of eight other criteria (some include special education status, whether the public school you would go to receive an "F" rating from the state in the previous year).

For more information, the State of Indiana Department of Education website contains information on the program, frequently asked questions, and annual reports.

The discriminatory behavior is not limited to Indiana schools. For example, Heritage Christan School in Coralville states in its handbook that "the school unashamedly states its opposition to non-Christian lifestyles,... homosexuality... the school will not hesitate to assert its discipline in areas where a student practices a lifestyle or engages in activities antagonistic to the policies, mission and vision of the school, regardless of where or when the event occurs." This discussion underscores the following reality: while the state may not discriminate, individual school districts can. And whether the state is able to support individual schools who discriminate is a different question, and one that will be discussed in the legality section of the paper.

As mentioned before, another important consideration with regards to equity is examining trends in geographic area. Similar to Table 4.4, Table 4.5 contains data from the US Census Bureau and the Indiana Department of Education. Combing this data will help in evaluating equity because it will show whether usage is proportional.

Table 4.5 indicates that the rural population is underrepresented in participation with the scholarship program. Conversely, the suburban population is overrepresented. Reasons for this are, similar to the discussion of racial disparities, somewhat irrelevant – it matters that a disparity exist for the purposes of the evaluation of equity.

As indicated by Tables 4.4 and 4.5, there are statistically significant differences in rates of participation and eligible populations between races as well as geographic locations. American Indians, Blacks, Native Hawaiians, and rural peoples are underrepresented. Whites, Hispanics/Latino(a)s, metro folks and suburban folks are overrepresented. Not only are the rates disproportionate, but the rates also fail to reveal the possible discrimination that happens at the local/school district level. As previously discussed, in order to qualify for a school voucher, one must be accepted into a private school in the first place. Many schools that are religiously affiliated have strong beliefs about whether LGBTQ students should be allowed to attend the schools in the first place. All of these factors indicate inequity in the state of Indiana with respects to the populations of people who use the vouchers.

Table 4.5: Is the participation in the Indiana Voucher Program with respect to geographic location proportionate?

	Population total	% of Population	Number of Participants	% of Participants
Metro	3,836,584	59.17%	20,123	61.56% ****
Suburban	860,516	13.27%	7,328	22.42% ****
Rural	1,786,702	27.56%	5,235	16.02% ****
	6,483,802	**100%**	**32,686**	**100%**

Note: Data for the first two columns were taken from the 2010 US Census Bureau. One limitation that is important to note is the lack of unification surrounding classification of geographic types. For example, the US Census has data on urban versus rural. The urban category is broken down into 2 sub-categories, namely "inside urbanized areas" and "inside urbanized clusters." Data for columns 3 and 4 is from the Department of Education of Indiana, 2015-2016 school year. Levels of significance are reported as follows: p<.10 (*); p<.05 (**); p<.01 (***); p<.001 (****)

There are some limitations to be aware of when evaluating this data. First, for the eligible population calculated for the racial backgrounds, the federal poverty line is not the same income level as the amount that is required for the Choice Scholarship Program in Indiana. While it is true that, theoretically, the percentages could drastically change, the federal poverty line is a good indicator of socioeconomic status. Another limitation is the census data – it is data from 2010, while the data from the State Department of Education of Indiana is from 2015-2016 school year. Lastly, this data is specific to the state of Indiana in the year of 2015-2016. It could be the case that the data for Iowa would look differently.

Education Savings Account

It is difficult to conduct an analysis on the education savings account policy since no extensive program currently exists. However, based off the discussion of school vouchers, we believe the inequities in terms of race and geographic location would worsen. This is because the school voucher program in Indiana indicates that it is not enough for everyone to have equal access to obtain a voucher to ensure equitable outcomes. Some populations may be less likely to have the resources to learn about the program. Some populations may have less resources to be able to fill out the correct paperwork to apply for the voucher program. An additional reason could be that the local private school districts are admitting different populations of people at different rates – and this data is not possible to obtain. Opening up the availability of every single family to use a grant from the state, we feel, would do two things. First, it would decrease the amount of money available to public schools, even more so than the voucher program. This is because more people would use the grants. Second, based off the data, we have strong reason to believe that there will be disparities in who participates in the voucher program. Based on the discussion above, we predict white students and students in suburbs would use the grants at disproportionately high rates. This has several implications, including that certain groups will be overrepresented in public schools. We have strong reason to believe these will be minority students and rural students. Also, the money that is diverted away from public schools will leave public schools with less resources. With these conditions, it is likely that public schools will receive less funding, and it is likely that minority students and rural students will be those most affected by lack of public school funding. These implications lead to us predicting that there will be more inequity should the state of Iowa adopt an Education Savings Account program.

Equity of Policy Alternatives

Option 1: Status Quo/Focus on Public Education
Although there are racial disparities in graduation rates in the state of Iowa, this is in part because public schools take in every student, regardless of ability status, race, sexual orientation, socioeconomic status, gender or religion. This leads to an increase in diversity of the student body, which requires more resources for schools to ensure equitable success.

Option 2: School Vouchers for Qualifying Students
The case study done on the state of Indiana suggests that the program results in inequitable results. Minority students, particularly black, American Indian, Native Hawaiian, and Asian were underrepresented in the participation of the voucher program. White students were overwhelmingly overrepresented. Students living in suburbs were also overrepresented, and rural students were drastically underrepresented.

Option 3: Education Savings Account
We predict that the inequitable results in Option 2 will be magnified in Option 3. There are multiple reasons for this. Public education funding will decrease more than when using Option 2. Additionally, the students who will be most affected by a decrease in public funding are minorities and rural students.

4.3.3 Legality

In order to evaluate the ability of the state of Iowa to implement its proposed Education Savings Account, it is necessary to examine the existing legal precedent regarding the concept of a School Voucher or Education Savings Account, as well as precedent regarding other forms of school vouchers. In addition, it was necessary to explore how existing precedent, as well as recent court cases, could impact the implementation of the proposed School Voucher Program or Education Savings Account from a legal perspective.

Status Quo/Focus on Public Education

With respect to the status quo, there is no question whether our current system is legal. This is because we do not have a voucher program or education savings account program. Therefore, legality is essentially a non-issue for our current system.

School Vouchers

The legality of school vouchers has been touched by Federal and State courts on numerous occasions. The current federally binding precedent on this subject is Zelman v. Simmons-Harris (00-1751) 536 U.S. 639 (2002), which held that tuition aid, including school vouchers, were Constitutional, even if the programs allow families to send their children to sectarian (religious based schools) using a publicly financed program. Recent cases at the state level, as well as the wording of the Constitution of the State of Iowa, present questions regarding the legality school vouchers, as well as of the proposed Education Savings Account.

One potential issue with the state of Iowa's existing laws on school choice funding is the Student Tuition Organization Tax Credit Program (STO) created by the Educational Opportunities Act. The STO provides grants for certain students, based on income, to attend non-public schools. In the companion Supreme Court cases of Committee for Public Education & Religious Liberty v. Nyquist,413 U.S. 756 (1973), and Sloan v. Lemon, 413 U.S. 825 (1973), the Supreme Court held that states could not enact education reimbursement schemes which "has the impermissible effect of advancing religious institutions" (Sloan v. Lemon, 4134 U.S. 825 (1973)).

In the case in question, the state of Pennsylvania reimbursed parents who sent their children to private schools, with the funding derived from state cigarette taxes (Sloan v. Lemon, 4134 U.S. 825 (1973). The State of Iowa does not appear to use cigarette taxes to fund the STO program, but instead uses the general state budget to fund the STO program. A proponent of the STO program in Iowa, the Iowa Alliance for Choice in Education, maintains a list of internet links to the 12 School Tuition Organizations in the State of Iowa. Nine of the 12 (the "Catholic Tuition Organization, Diocese of Des Moines," "Heart of Iowa STO," "Iowa Lutheran School Tuition Organization," "Legacy of Grace STO," "Mississippi Valley STO", "North Central Iowa STO", "Northwest Iowa Christian School Tuition Organization", "Our Faith, Our Children, Our Future STO," and the "School Tuition Organization of Southeast Iowa") are either explicitly sectarian by name or only provide tuition assistance to sectarian schools. As a result, there is a strong potential for a lawsuit arguing that the State of Iowa's STO violates Sloan v. Lemon (1973), by creating a system that "has the impermissible effect of advancing religious institutions" as a result of a state program which subsidizes parents paying tuition to sectarian institutions from public tax money.

Education Savings Account

A recent court case in the state of Nevada (Ruby Duncan et al. v. State of Nevada et al.), found that the state of Nevada's Education Savings Fund plan was unconstitutional. Although the Nevada Supreme Court did not hold that the Savings Account violated the state constitution for money "used for a sectarian purpose" (Article 11, Section 10, Constitution of the State of Nevada), the wording of the Constitution of the State of Iowa allows for the potential that, at minimum, the proposed Education Savings Account will be mired in lawsuits for some time, likely delaying its implementation. Even though Iowa and Nevada do not share identical Constitutional provisions regarding this topic, the Iowa Constitution's Bill of Rights, in Article I, Section 3, states the following:

> The General Assembly shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; nor shall any person be compelled to attend any place of worship, pay tithes, taxes, or other rates for building or repairing places of worship, or the maintenance of any minister, or ministry.'

Similar to the voucher program at issue in Zelman, the proposed Iowa Education Savings Account allows parents to select a school for their child, and use the proposed Account to pay for access to that school, regardless of whether the school has a sectarian nature. As noted in the dissent in Zelman, money has the potential to be fungible. A fungible item, as noted by the Third Edition of the Oxford English Dictionary, is "an item that can be replaced by another identical item." In the context of school vouchers and sectarian schools, this would be the equivalent of a hypothetical family (hereafter the Smith's) using a voucher to send their children to a local sectarian high school run by a church. This usage of vouchers would allow the church in question to repair a building or pay its minister with the money paid through the voucher rather than money made via private donations, thus creating a situation where the Smith family, as well as the Iowa taxpayer, is funding the repair of a church steeple or paying the salary of a minister.

As such, there is a strong potential for a lawsuit against the state of Iowa arguing that the proposed Education Savings Account violates the state constitution on the following grounds: that Iowan taxpayers are indirectly paying taxes to maintain ministers and the "building or repair[ing of] places of worship" since, by paying for a student to attend a sectarian school, the Iowa taxpayer is now a de facto subsidizer of any ministerial or building improvement, this makes the proposed Education Savings Fund contradictory to the Constitution of the State of Iowa, at least so long as said proposal includes the ability to use the Fund to pay for tuition at a sectarian school.

Another legal question regarding the State of Iowa's decision to enact the proposed Education Savings Account program is the question of discrimination against LGBTQ individuals by private, sectarian schools. According to Iowa Code 216.9(2), any “bona fide religious institution" is exempt from anti-discrimination laws regarding religion, sexuality, and gender orientation, so long as such qualifications relate to “a bona fide religious purpose." While the law is clear in granting this exemption, the question remains open as to whether the State of Iowa would be in violation of Iowa Code 216.9 by funding institutions which engage in this form of discrimination, even if such funding is indirect.

Legality of Policy Alternatives

The state of Iowa is considering an Education Savings Account to help families pay for education at private schools. The question of whether or not this proposal would be legal is tied to the question of legality of school voucher programs in general.

> **Zelman v. Simmons-Harris (536 U.S. 639 (2002):**
> The United States Supreme Court ruled that school vouchers were Constitutional, even if sectarian schools were aided.
>
> **Sloan v. Lemon, Committee for Public Education & Religious Liberty v. Nyquist, and Ruby Duncan et al. v. State of Nevada et al.:**
> These allow for the potential of, at minimum, significant legal action by the State of Iowa being necessary to maintain the Education Savings Account.

Many private schools which would be attended by students using the Education Savings Account discriminate based on sexual orientation, raising concerns about whether the exemption of religious schools from Iowa’s anti-discrimination law could be jeopardized based on the indirect extension of state funds toward private, sectarian schools.

In sum, the existing Federal precedent of Zelman v. Simmons-Harris (00-1751) 536 U.S. 639 (2002) would not invalidate the existence of state school voucher programs as a policy choice. However, the existence of numerous court cases, at both the state and Federal levels, allow for the potential that the State of Iowa’s school choice programs could face serious legal battles regarding the proposed school choice plans.

4.4 Policy Recommendation

The following section includes our policy proposal based off our analysis in the previous section. More specifically, we take into account the effectiveness, equity, and legality of the three different proposals.

Based off of our evaluations (see Table 4.6), we propose to maintain the current education system of Iowa, which provides state funding only to public schools and focus resources to improving public schools. Beginning with “Status Quo/Focus on Public Education," we gave a positive score for effectiveness. This is because Iowa public schools have consistently outperformed the national average for four-year graduation rates. Not only that, but Iowa has consistently had the highest four-year public graduation rates of any state in the country. One limitation to this is that Iowa is relatively white compared to the rest of the country, and race may be a spurious variable. However, when controlling for race, Iowa still outperforms the national averages in every racial category. Furthermore, when looking solely at white students’ four-year graduation rates in the state, Iowa has the 6th highest rate out of all 50 states. For black students, Iowa ranks in the top 15. For Hispanic students, Iowa has the 6th highest rate. All of this indicates that Iowa public schools consistently outperform then national averages.

We gave “Status Quo/Focus on Public Education" a neutral score for equity. The reason for this score is because while white students perform well, there is still an unequal distribution of success measured in graduation rates among students of racial minority identities. Additionally,

Table 4.6: Is participation in the Indiana Voucher Program geographically proportionate?

	Population total	% of Population	Number of Participants	% of Participants
Metro	3,836,584	59.17%	20,123	61.56% ****
Suburban	860,516	13.27%	7,328	22.42% ****
Rural	1,786,702	27.56%	5,235	16.02% ****
	6,483,802	**100%**	**32,686**	**100%**

Note: The columns are the 3 different criteria chosen to evaluate the different policy alternatives (shown on the rows). A "positive (+)" indicates a strength, while a "negative (+)" indicates a weakness. A "neutral (+/−)" indicates neutral.

public schools do not discriminate against students, making it equitable in that sense. The third criteria for "Status Quo/Focus on Public Education" is legality. This is simple– our current system has no legal questions, and therefore received a "positive (+)."

Moving on to "School Vouchers for Qualifying Students," our evaluation indicates that while this option improves effectiveness, equity and legality concerns outweigh the possible benefits found in the effectiveness category. Effectiveness for this option was evaluated in two different ways: graduations rates and standardized test performance. For graduation rates, our research shows that exposure to a voucher program, and in some cases just the option of one, increases graduation rates. For standardized test performance, the results are inconclusive, and a voucher system in other states has had little to no impact on standardized test scores for students as a whole. In summary, having a voucher program in the state of Iowa could improve overall effectiveness for graduation rates (possibly income as well).

Policy Recommendation

Based off our analysis, we conclude that the Status Quo/Focusing on Public Education option would be best. This is because the public education in Iowa has some of the best public high school graduation rates in the country. School Vouchers and the Education Savings Fund options threaten the public education funding and have the potential to increase racial and geographic disparities. Additionally, serious legal questions increase the risk of implementing both options.

"School Vouchers for Qualifying Students" received a negative score in regards to equity. There are a variety of reasons for this score. First, data from the state of Indiana suggest that participation rates for racial minorities (specifically American Indian, Black, Asian, and Native Hawaiian) and rural students are disproportionately lower than their expected rates of participation. Second, private schools are able to discriminate without regulation. This includes being able to refuse admittance to students who have a disability, are LGBTQ, or are racial minorities.

"School Vouchers for Qualifying Students" also received a negative score in the legality section. Essentially, there is a very high chance the state of Iowa could be sued due to the precedence set in Sloan v. Lemon (1973), which states that creating a system that "has the impermissible effect of advancing religious institutions" is unconstitutional. Seeing that many private schools in Iowa publicly identify with faith-based learning, there is high possibility that donating public funding to private institutions could create legal trouble for Iowa.

Finally, we will look at our evaluation of "Education Savings Account." Again, similar to the Voucher program evaluation, we think that there would be positive outcomes with regards to effectiveness. This would result due to increased options and more competition. However, these potential benefits are overridden by concerns with equity and legality. We predict equity would be even worse for this option than School Vouchers for Qualifying Students. This is due to the likelihood that white and suburban students, who are commonly already at an advantage for success, will have disproportionately higher usage of the voucher program. This would result in less resources left for public schools, leaving minority and rural students most affected by lack of public school funding. Lastly, there exists the same concerns as those outlined for “School Vouchers for Qualifying Students" regarding legality issues; in other words, the Education Savings Account option has a high likelihood of causing some legal complications in the state of Iowa.

5. Is Health Care Too Managed?

5.1 Executive Summary

In 2016, Iowa began dramatic privatization of the state's Medicaid program by handing over Medicaid management to three private Managed Care Organizations (MCOs). Proponents of this shift argue that this policy will save the state money while increasing the quality of care for Medicaid recipients, while opponents argue that this policy reduces the quality of care Medicaid enrollees receive. This paper attempts to provide some clarity in this debate.

Using a number of disparate sources from both inside and outside the state of Iowa, we ultimately find the following:

- States with less managed care spending are ranked as healthier states.
- States with less managed care spending have less Emergency Department visits.
- Medicaid recipients receive higher quality of care in states with less managed care spending.

Based on our research, **we strongly recommend the state of Iowa should do the following following**:

(1) Iowa should re-evaluate its spending on managed care and strongly consider the unfavorable opinion many citizens hold towards manage care in the state of Iowa.

(2) Iowa should immediately reverse the growth of managed care spending. Although in theory managed care makes sense, in practice it has proven to be an intractable solution.

The further expansion of Iowa's managed care program would be unwise at this time; the state should thoroughly re-evaluate the program before any future expansion decisions are made. We urge Iowa legislators to re-consider spending towards managed care programs as the matter is pressing.

For these reasons, Iowa should slow, stop, or preferably reverse the growth of managed care programs within the state until all available evidence says otherwise.

5.2 Introduction

One of the most pressing issues in the current political landscape is healthcare. This is true nationwide, and it is true in Iowa. Healthcare is a complex issue, with many sub-issues and controversies intertwined underneath the larger healthcare umbrella. Much of the debate in Iowa recently has surrounded recent changes to Medicaid. In 2016, Iowa implemented extensive privatization of government-funded Medicaid. Extensive backlash soon followed from Medicaid recipients, playing out in a near constant stream of media coverage from Iowa organizations. Reports of declining quality of care and reduced access to specialists have caused trepidations over the privatization of Medicaid.

Iowa's recent push for privatization handed over Medicaid administration to Managed Care Organizations (MCOs). Essentially, the state turned over their responsibility to administer and manage health coverage for Medicaid recipients to private organizations.

> **How Does Managed Care Work in Iowa?**
>
> Iowa's recent push for privatization handed over Medicaid management and administration to three Managed Care Organizations (MCOs). The state contracts with three privately-run MCOs (Amerigroup, AmeriHealth Caritas, and UnitedHealthcare) to manage payments to healthcare providers. Healthcare providers can contract with one, two, or all three MCOs. Meanwhile, each Medicaid recipient must select exactly one of the MCOs to serve as their provider. Each year, the state gives each MCO a flat payment for every recipient enrolled with them. Before the implementation of MCOs, the state directly paid healthcare providers for services provided to Medicaid recipients directly. Now, the MCOs function as an intermediary.

Prior to this change, the state (with additional assistance from the federal government) paid hospitals and other healthcare providers directly whenever a Medicaid recipient received medical care. Now, the state contracts with three privately-run MCOs (Amerigroup, AmeriHealth Caritas, and UnitedHealthcare) to manage payments to healthcare providers. Healthcare providers can contract with one, two, or all three MCOs. Meanwhile, each Medicaid recipient must select exactly one of the MCOs to serve as their provider. Each year, the state gives each MCO a flat payment for every recipient enrolled with them. The MCOs expect to make a profit from those recipients who do not visit a healthcare provider within a given year, or whose healthcare costs are less than the flat fee. The state, meanwhile, benefits from more predictable expenditures and from reduced administrative expense and complexity. Proponents of private managed care programs also argue that the privately-managed, competitive MCOs will find ways to reduce costs and increase efficiency, decreasing state spending on healthcare in the long run, while also finding ways to improve care for Medicaid recipients.

This plan sounds perfect on paper, but data from Iowa and other states with full or partial managed care programs have called into question some of its assumptions. A Medicaid recipient previously seeing a set of doctors and specialists before managed care expansion may not be able to continue seeing these same specialists afterwards, as the recipient is limited to using one MCO, while healthcare providers are not required to accept all three. Therefore, a recipient's healthcare provider may still accept Medicaid, but not accept the recipient's specific provider. It is possible, if not likely, that for some Medicaid recipients, none of the MCOs contract with every specialist the recipient must see or has seen.

So, while the state sees reduced administrative complexity, Medicaid recipients actually see increased complexity from the shift to MCOs. They must consider which of their providers accepts which MCOs and select accordingly, in some cases perhaps choosing the least bad option. Additionally, some worry that introducing private, profit-seeking organizations into Medicaid introduces an incentive to cut benefits and reduce quality of care, in order to increase profit.

What are the Arguments for and against Managed Care?

The Argument For: The state benefits from more predictable expenditures and from reduced administrative expense and complexity. Proponents of private managed care programs also argue that the privately-managed, competitive MCOs will find ways to reduce costs and increase efficiency, decreasing overall state spending on healthcare in the long run, while also finding ways to improve care for Medicaid recipients.
The Argument Against: While the state sees reduced administrative complexity, Medicaid recipients actually see increased complexity from the shift to MCOs. They must consider which of their providers accepts which MCOs and select accordingly, in some cases perhaps choosing the least bad option. Additionally, some worry that introducing private, profit-seeking organizations into Medicaid introduces an incentive to cut benefits and reduce quality of care, in order to increase profit. Finally, there is yet little evidence that managed care organizations actually save money or lead to better health outcomes, with some evidence suggesting the opposite.

Before 2015, Iowa's use of managed care was quite small, with less than 2% of the federal portion of Medicaid expenditures going to managed care programs. This number had increased to 13% by 2015 and then skyrocketed to 42% in 2016. This 233% increase in managed care spending was by far the largest single-year increase in managed care spending [23]. This large of an increase would be advisable in the face of ample evidence showing MCOs do in fact cut costs and increase (or even maintain) quality of care. The switch is more worrying when the data is inconclusive, and a chance remains that MCOS actually decrease health outcomes for Medicaid recipients.

In this report, we will summarize the findings of a number of studies examining the relationship between managed care programs, healthcare spending, and health outcomes, while also contributing our own data and analysis. Finally, we will draw conclusions about the overall effectiveness and advisability of managed care programs in Iowa.

5.3 Healthcare Spending

5.3.1 Iowa

In Iowa, the nonpartisan Legislative Services Agency reported that the state spent $600 less per Medicaid enrollee in the first year after the implementation of managed care, with the average annual cost per enrollee falling seven percent from $8,289 to $7,689 [6]. Many have called out this number as inaccurate, however, as it does not take into account millions of dollars the MCOs list, which Iowa has agreed to at least partially repay in 2018 [6]. As a result, those losses don't show up in the current year's budget, giving the managed care program a much more favorable appearance on spending than it has actually earned.

In 2015, then-Governor Terry Branstad predicted that the managed care program would save the state $232 million in 2018. A a new report from the Department of Human Services (DHS) states that Iowa instead stands to save only $47.1 million this year, 80% less than initially predicted [22, page 3]. DHS, using the same criteria, also reported that Iowa saved a total of $119 million the previous year. It is difficult to derive too much meaning from only a few yeary of Iowa's managed care program, especially the first few years after implementation. These measures are important to follow, however. Meanwhile, additional knowledge can be gained from looking at what has happened in other states that have implemented managed care programs.

5.3.2 United States

In the *Journal of Health Care Organization, Provision, and Financing* Kyle Caswell and Sharon Long [5] examined the relationship between managed care penetration (meaning the number of

Medicaid recipients whose care is managed by a private organization, and not the state) and various measures of healthcare quality. They found that increased managed care penetration is associated with (i) a greater probability of one or more emergency department visits, (ii) a greater probability of difficulty seeing a specialist for those who need a specialist, and (iii) a greater probability of unmet need for prescription drugs. These relationships were all statistically significant. Of these three relationships, the effect size was largest for difficulty seeing a specialist, with every 10-percentage point increase in managed care penetration being associated with an approximately 1.4 percentage point increase in the probability of difficulty seeing a specialist for those who need a specialist. This fits with our previous discussion of how managed care programs affect a patient's ability to see necessary specialists.

An analysis by George Rimler and Richard Morrison in the Journal of Business examined the effects managed care programs have on cost and quality of care using research from the Institute of Medicine[29]. On the issue of cost, they found that managed care programs have lead to a decrease in inpatient hospital use, measured by a decrease in hospital inpatient days, ranging from five to fifteen percent. This reduction holds even when controlling for other factors such as changes in insurance plan design and growth in outpatient resources. However, this reduction has been somewhat offset by increased costs from outpatient care and program administration. Additionally, they found that managed care programs have not been able to slow the growth of healthcare costs. Even if at first there is a slight slowdown in growth, the growth rate soon returns to previous levels.

The same study found that managed care did not noticeably decrease the quality of care received, but it did cause additional stress and anxiety for some patients and added to the administrative burden placed on healthcare providers. They also found that managed care tended to contribute to increased resentment from healthcare providers about decreased professional autonomy and satisfaction. As most healthcare providers will tell you, introducing stress and anxiety into health treatments is far from advisable, and the additional complications that managed care adds to finding and securing required healthcare seem to do just this.

Rimler and Morrison's review also found that the average Medicaid enrollee, "with average health care needs," is usually satisfied with managed care programs, while the still substantial group of patients whose needs lie outside the average need are often quite unsatisfied:

> Two types of complaints occurred frequently in testimony and written comments submitted to the task force. In the first type enrollees complained of their inability to access specific kinds of providers, either because contract provisions do not provide for the reimbursement, or because the practice ideologies of primary care "gatekeepers" prevented access. For example, contract provisions often prevent direct access to the services of dental hygienists, physical therapists, or specialists such as dermatologists without referral from a primary care gatekeeper. A more frequent concern was that although contracts often provide for their use, access to chiropractic care was effectively foreclosed by either the primary care physician gatekeepers or by review agents who discriminated against chiropractic care.

They report that this unsatisfied group may eventually become frustrated with the complexity of seeking treatment under managed care, and as a result, may be deterred from seeking care in the first place. This would fit with our discussion of decreased regular checkups and preventative care leading to increases in emergency room visits and worse overall health outcomes, which is found in the following Methodology section.

What Has Other Research Found?

Research has found:

(1) Increased managed care penetration is associated with (a) a greater probability of one or more emergency department visits, (b) a greater probability of difficulty seeing a specialist for those who need a specialist, and (c) a greater probability of unmet need for prescription drugs.

(2 On the cost front, managed care programs have lead to a decrease in inpatient hospital use, which cuts costs, but this has been somewhat balanced out by increases in outpatient costs. Overall, managed care programs has not been able to slow the growth of healthcare costs.

(3) Managed care does not noticeably decrease the quality of care received, but it does cause additional stress and anxiety for some patients and additional administrative burden for healthcare providers.

(4) The average Medicaid enrollee with average health care needs is usually satisfied with managed care programs, while the still substantial group of patients whose needs lie outside the average need are often quite unsatisfied.

5.4 Policy Evaluation

5.4.1 Hospitalization

We sought to examine the relationship between the proliferation of managed care programs and health outcomes. While previous research had used a measure of managed care penetration (ie, what percentage of Medicaid recipients were in a managed care program versus a traditional state-administered Medicaid program) to operationalize the managed care variable, we decided to look at managed care spending as a percentage of total Medicaid spending within a state.

Spending data came from a December 2015 US Government Accountability Office report entitled “Medicaid Managed Care Trends in Federal Spending and State Oversight of Costs and Enrollment." The report provided federal expenditures on managed care as a percent of total Medicaid expenditures for the fiscal years 2004 and 2014. Data from 2004 were adjusted using the gross domestic product price index to 2014 dollars. Expenditures include only the federal share of spending and do not include the state share.

Measuring “health outcomes” is rather difficult, as health is somewhat subjective and difficult to measure objectively on a scale as large as a state. We chose to look at two variables as a measure of health. First, we looked at emergency department visits. For many, the emergency department functions as a healthcare provider of last resort, patients go there when their condition has gotten so bad that they need emergency treatment. In the emergency department, patients are guaranteed treatment, even if they cannot prove upfront that they have health insurance, or the means to pay for their treatment. If patients have an adequate amount of health insurance, they will, in many cases, seek preventative treatment before their health deteriorates to the point of needing an emergency department. Patients with adequate health insurance will also more often seek regular or semi-regular checkups, which will help catch health issues before they become more serious. For these reasons, we take it that a greater number of emergency department visits represents a negative result when it comes to health. We would rather see more people seeking treatment in non-emergency situations, rather than waiting until their condition has reached a dangerous, critical point.

Data on the number of emergency department visits came from the Healthcare Cost and Utilization Project (HCUP) State Emergency Department Databases (SEDD) and State Inpatient Databases (SID). These databases record the number of Emergency Department (ED) visits, not the number of people or patients. So, if a person visits an ED multiples times, each will be counted as a separate ED visit. The SEDD and SID record ED visits which do not result in an admission, so they include treat-and-release visits as well as transfers to other hospitals. The data are limited to patients treated in hospital-owned EDs of community hospitals, so ED visits for patients transferred to another acute care hospital are excluded. Some hospitals are missing from the SEDD and the SID, about seven percent of community hospitals (about 1.5 percent of discharges) are missing from the SID and about five percent of EDs (about 2 percent of ED visits) are missing from the SEDD. Data from the American Hospital Association (AHA) Survey of Hospitals and the Trauma Information Exchange Program (TIEP) database by the American Trauma Society are used by HCUP to adjust ED visit counts for these missing hospitals. The HCUP also provided data on the expected payer of ED visits, and we use this to measure how many ED visits are by Medicaid patients, and how many are from patients with employer, private, or no insurance.

The HCUP databases provided state-level data for 31 states, including Iowa, so our analysis involving ED visits was limited to these states. One potentially relevant issue worth noting is that, prior to 2011, New York coding for ED visits did not distinguish between patients covered by commercial managed care plans and patients covered by Medicaid managed care plans. Because of this, ED visits for patients with Medicaid managed care plans are reported under private insurance. Starting in 2011, the expected payer coding in New York data separately identifies Medicaid managed care patients, and ED visits for these patients are correctly reported under Medicaid.

We used state-level population data to calculate ED visits per capita, as a means of controlling for population differences between states. We took population data from the US Census Bureau's Intercensal Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico for data from April 1, 2000 to July 1, 2010. For data from April 1, 2010 to July 1, 2016, we used the Bureau's Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico.

As the HCUP databases provided information on ED visits from Medicaid patients, we also wanted to examine the effect of managed care spending on Medicaid patients in particular. To control for population within this analysis we used state-level Medicaid enrollment data from the Kaiser Family Foundation [12], a well-known non-profit organization which provides data and analysis on healthcare topics.

Why Are Emergency Department Visits Important?

Generally speaking, more visits to the emergency room is a bad thing, for an individual and for a healthcare system. There are two primary reasons we don't want to see more ED visits.

(1) **It is a sign of a less healthy population with worse access to healthcare.** The emergency department functions as a healthcare provider of last resort; patients go there when their condition has gotten so bad that they need emergency treatment. Patients with adequate health insurance will also more often seek regular or semi-regular checkups, which will help catch health issues before they become more serious and require emergency visits. We would rather see more people seeking treatment in non-emergency situations, rather than waiting until their condition has reached a dangerous, critical point.

(2) **Emergency room visits are increasingly and extremely expensive.** A new analysis released in December 2017 found that between 2009 and 2015, ER prices rose a whopping 85%, some emergency room visits saw their price increase over $400 in that six year period (Kennedy). In the long run, it is much cheaper for a healthcare system to drive people to regular checkups and preventative care, rather than dealing with expensive emergency treatment after the issue has already become severe. Driving more people to the emergency room will only exacerbate the problem of expensive healthcare in the US.

We also sought to find a measure of general, overall health. We found a potential measure in *America's Health Ranking Annual Report*, a collaboration between United Health Foundation and the American Public Health Association[13]. The *Annual Report* is the longest-running annual assessment of the country's health on a state level. The report analyzes a "comprehensive set of behaviors, community and environmental conditions, policies, and clinical care data to provide a holistic view of the health of the nation." The 2016 report examined nearly 33,000 individual data points for each state in order to make an overall assessment of the state's health, including but not limited to state-level data on smoking, excessive drinking, seat belt use, public health funding, preventable hospitalizations, obesity, heart disease, diabetes, strokes, frequent mental distress, dental visits, cancer screenings, and immunizations. Due to the depth and breadth of this dataset, we used the ranking each state received in the Annual Report as a measurement for the overall health of each state.

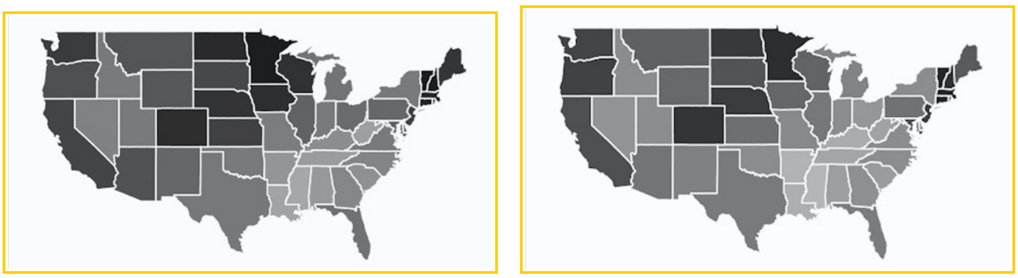
5.4.2 Health Ranking

From 2004 to 2014, Iowa's health ranking fell from 10th to 24th. During that same period, there was no significant change in the amount Iowa was spending on Medicaid managed care programs. The specific data points for Figure 5.1a through 5.2b are available in the online appendix.

As Figures 5.2a and 5.2b show, managed care became much more popular across the US between 2004 and 2014. In 2004, the average percentage of federal spending on managed care in the five states with the most managed care spending was around 43%. By 2014, that same average was nearly 79%. The average managed care spending for all states increased from 11% in 2004 to 31% by 2014. Additionally, the number of states with no managed care spending decreased from 14 states in 2004 to 10 states by 2014.

Figure 5.1: State Health Rankings

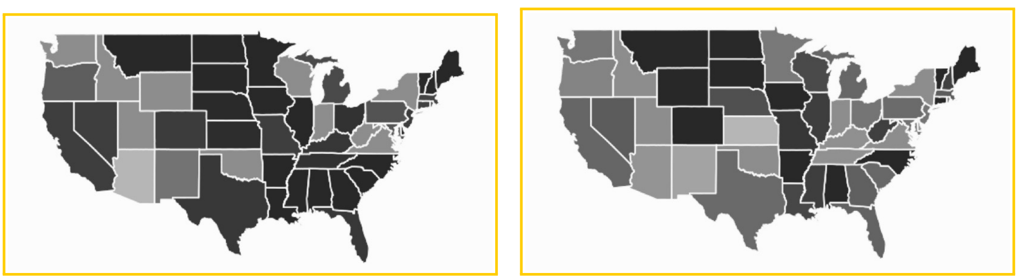
(a) 2004 **(b) 2014**



Note: In Panels A and B, we show how states are ranked based on their healthiness in 2004 and 2014, respectively. Darker shades indicate a higher ranking.

Figure 5.2: Managed Care Spending

(a) 2004 **(b) 2014**



Note: In Panels A and B, we show the percentage each state spent on Medicaid managed care programs in 2004 and 2014, respectively. Darker shades indicate the state spent *less* on Medicaid managed care programs.

Between 2004 and 2014, Iowa saw a dramatic improvement in the number of ED visits per Medicaid enrollee, from 0.728 visits per enrollee in 2004 to 0.386 by 2014. Average ED visits per

Enrollee for all states fell from 0.455 in 2004 to 0.380 by 2014. It is worth noting, particularly for the rankings shown in Figures 5.1a and 5.1b, that our data sets only provided information on 23 states in 2004, and 19 states in 2014. So, the rankings displayed are rankings within those sets of 23 and 19 states, respectively.

Our results found few statistically significant relationships between relevant variables. There was a negative relationship between managed care spending and health ranking for both years for which we had data. This could indicate that increasing managed care spending decreases overall health outcomes, but the trend was slight and the limited availability of data means we can not draw any meaningful conclusion about the relationship. Additionally, there were positive relationships between managed care spending and ED visits. The relationship held for both ED visits per capita and gross ED visits, and seems to indicate that increases in managed care spending is accompanied by increases in ED visits for the entire state population. Again, the relationship was not statistically significant.

Summary of Results

Our research found few statistically significant relationships between managed care spending and health outcomes or ER visits. Slight trends were observed, and they are listed below, but note that unless otherwise noted, the trends were not statistically significant, and are therefore unable to be used for predictive purposes or to establish a causal connection.

(1) More spending on managed care is associated with slight decreases in a state's health ranking.
(2) More spending on managed care is associated with slight increases in gross and per capita ED visits by the state's total population.
(3) More spending on managed care is associated with slight increases in gross ED visits by Medicaid enrollees, and with slight decreases in ED visits by Medicaid enrollees per enrollee. Only this last relationship was statistically significant.

The only statistically significant relationship (at the 10% level) was between spending on managed care programs and ED visits by Medicaid recipients. States with a greater percentage of Medicaid spending going towards managed care programs tended to have slightly fewer ED visits by Medicaid recipients per enrollee. A simple linear regression predicted that increasing managed care spending dramatically from 0% to 100% would see 0.1 fewer ED visits by Medicaid recipients per enrollee. A state like Iowa, with somewhere around 560,000 Medicaid recipients, would see ED visits from those recipients decrease by around 68,000 visits. For Iowa, every additional 10% of Medicaid spending that goes toward managed care programs would be correlated with a predicted 6,800 decrease in Medicaid recipient ED visits.

Taken together, our results fail to show much of a relationship between spending on managed care programs and overall health ranking or on ED visits, within the entire population of the state or within the Medicaid population.

5.5 Policy Recommendation

Three primary policy alternatives face the state of Iowa on the topic of managed care programs at this time. (i) Iowa could continue their current level of spending on managed care, which was up to over 40% in 2016. (ii) Iowa could lower their use of managed care, with a greater majority of Medicaid administered by government agencies. (iii) Or, finally, Iowa could increase their spending on managed care programs to administer Medicaid.

When considering which route to take, many criteria could and potentially should be taken into account. Two criteria worth considering are those analyzed here, Emergency Department visits, and health outcomes. Other important criterion are that of political feasibility and spending. No one wants to waste time lobbying for a policy change with no political feasibility, and, ideally, less money would be spent while maintaining quality of care for Medicaid recipients. The ideal

Table 5.1: What is the best policy according to the criteria we used?

	Emergency Department Visits	Health Outcomes	Political Feasibility	Spending
Status Quo	-	-	+	+/-
Decreased MCO Spending	+	+	+/-	+/-
Increased MCO Spending	-	-	+/-	+/-

Note: Using the analysis from prior sections, implementing less managed care spending meets the most criteria. A $+$ indicates a strength, while a $-$ indicates a weakness. A $+/-$ indicates a neutral finding.

policy alternative would lower the levels of Emergency Department visits by providing Medicaid recipients easier access to regular checkups and preventative care. Health outcomes, such as health ranking, would hopefully improve with the chosen policy alternative. And, of course, the ideal policy alternative should be politically feasible; meaning, it must have the potential to be passed by relevant legislative bodies.

Political feasibility will practically depend on which party controls the Iowa legislature, with the Democratic Party being more amiable to decreasing privatization by decreasing or eliminating managed care spending, while the Republican Party, who initiated the managed care push under Governor Branstad, are much more keen to keep managed care spending at current or greater levels. However, regardless of who controls the legislature, the path of least resistance is always that of the status quo.

The literature reviewed above found no conclusive relationship between spending and managed care, so it is difficult to make any statements on how implementing managed care may affect healthcare spending. Additionally, the literature reviewed also indicated managed care can be associated with increased ED visits and decreased health outcomes for Medicaid recipients.

These four criteria are a very limited set, as are the three policy alternatives. If Iowa choses to stick with the status quo or increase its level of managed care spending, several other secondary policy alternatives could be worth considering. (i) Contract with only one MCO to ensure every Medicaid recipient could continue seeing all of their current specialists and see any healthcare provider they might need to see. (ii) Mandate that every healthcare provider contract with all three MCOs, to achieve the same ends.

Potential problems with these alternatives are that they may be politically difficult to enact, or administratively difficult to execute. It may be difficult for Iowa legislators to cut off spending to two of the three major privately-run MCO providers. It may also be administratively difficult to force all healthcare providers to contract with all of the privately-run MCO providers. Furthermore, of course, Iowa could continue with the current three MCOs and no requirement that healthcare providers accept all three. This alternative is perfectly feasible, as it is already in effect. However, it carries with it the significant downside of Medicaid recipients potentially being unable to see all specialists. In turn, this could decrease Iowa's overall healthiness and potentially increase overall ED visits.

The most notable trend within our own research and within our review of relevant literature is a distinct lack of conclusiveness. There is evidence, theory, and opinions on both sides of the Medicaid privatization argument, but neither side has made a strong enough case to conclude that one is undoubtedly better than the other. In our eyes, Iowa's decision to begin Medicaid privatization was unnecessarily rushed. Our own research and that of others has showed no consistent indication of better health outcomes resulting from managed care implementation. In fact, the research has found some evidence of worse health outcomes, and a worse overall healthcare experience, especially for Medicaid recipients with above average healthcare needs.

Another important factor to consider when choosing the best alternative is public support. A large number of local media sites have already condemned Iowa's introduction of Managed Care Organizations, both in their editorial pages and in their reporting, as Medicaid recipients voice their displeasure and their inability or difficulty in accessing necessary treatment. Some polls show as many as 47% of Iowans disapproving of the managed care program [21, page 1]. Iowa has also been criticized nationwide, including by the world-renowned Mayo Clinic, which has condemned Iowa's managed care move and stated that Iowans will have more difficulty accessing treatment at Mayo as a result of the shift [21, page 2].

What Should Be Done?

The most notable trend within our own research and within our review of relevant literature is a distinct lack of conclusiveness. In our eyes, Iowa's decision to begin Medicaid privatization was unnecessarily rushed. Some form of managed care may ultimately turn out to be the correct answer for how to best serve the people of Iowa, but its current form needlessly complicates an already stressful part of life and introduces dramatic, unnecessary risks all because there is simply not enough evidence to be sure managed care actually works. Additionally, the current system of managed care programs in Iowa is unpopular with Medicaid recipients and respected medical institutions. Iowa's current decision-making process on healthcare seems to place short-term fiscal concerns above the health and wellbeing of its citizens, and this should be changed.

Iowa should slow, stop, or preferably reverse the growth of managed care programs within the state until more evidence is available on the best way to proceed.

Some form of managed care may ultimately turn out to be the correct answer for how to best serve the people of Iowa, but its current form needlessly complicates an already stressful part of life and introduces dramatic, unnecessary risks all because there is simply not enough evidence to be sure managed care actually works. As a result, Iowa should slow, stop, or, preferably, reverse the growth of managed care programs within the state until more evidence is available.

If Iowa wishes to pursue managed care implementation, it should do so slowly, analyzing in detail the effects each step has on spending and the population's health outcomes, and quickly reversing any change with negative results. Such slow, deliberative policy-making is not easy in today's political climate, but it is necessary to ensure a state fulfills its responsibilities and protects its citizens. Iowa's current decision-making process on healthcare seems to place short-term fiscal concerns above the health and wellbeing of its citizens, which ignores more serious long-term effects for the state of Iowa and the health of its citizens.

We believe that the structure of our analysis is both sound and useful, offering a meaningful way to analyze the important outcomes of implementing managed care programs. Where our analysis is limited, it is limited by access to data. Future research in this field, hopefully research Iowa legislators will consider in their decision-making, would look to include data from many more years and possibly across other measures. For Iowa in particular, more recent data for all measures would be insightful, as the large push for managed care did not take place until the years following the data in our analysis. Only with this data can a more full story of Iowa's healthcare be told.

Future Directions

6. Getting Involved

6.1 How Do I Give IPRO New Research Topics?

IPRO is always looking for research topics, especially those that pertain to important issues facing the state of Iowa! We have produced policy research on a number of topics, including health care, education, tax, and environmental policy. If you would like us to research a specific topic, please email the IPRO director (`bryce-dietrich@uiowa.edu`). Professor Dietrich would be happy to put you into contact with the right IPRO members to help you with your research needs.

Additional information can also be found on our website (`https://honors.uiowa.edu/experiential-learning/ipro`) and our Twitter page (`http://twitter.com/IowaPolicy`). There you will find information about IPRO and also our contact information. We are both a passionate and productive research organization. Not only do we produce the *Hawkeye Policy Report*, but we also have produce several additional publications, including the flyers you likely received at the *Hawkeye Caucus Day*. Please let us know how we can help!

6.2 How Can I Help?

In addition to providing research topics, we are also looking for individuals to contribute in any number of ways. If you are interested in donating to IPRO, please contact the IPRO director (`bryce-dietrich@uiowa.edu`). IPRO has received continues to receive incredible financial and technical support from the Department of Political Science and the Honors program at the University of Iowa. Any contribution will help IPRO continue to research the important issues facing the state of Iowa. If you have any questions, please ask!

We conclude the 2017-2018 *Hawkeye Policy Report* with the short- and long-term plans you would help support!

7. Next Steps

7.1 IPRO 2018-2019

Tom Rice's original vision still lives on in IPRO today. Not only has IPRO produced high quality research, but some of the best students at the University of Iowa have at one time been IPRO members. An expanded Honors Teaching Practicum is the newest feature of our organization. The goal of this program is to have past IPRO members mentor current IPRO students. More specifically, several current IPRO members will work with Professor Dietrich to do the following:

(1) **Hawkeye Policy Blog** - The IPRO blog will give student the ability to actively describe and debate relevant policy issues. The content for the blog will be produced as short assignments in the Legislative Research Seminar. That content will then be edited by one of the current IPRO students to ensure it meets our organization's standards.

(2) **Expanded Website** – Even though our website "is a major vehicle for report dissemination" [27], it does not give viewers the ability to interact with IPRO content. Through interactive graphics and other data visualization techniques we will more vividly display the work of IPRO students. Fortunately, one of our current IPRO members helps the University with website development, so we plan on asking him to assist with this project.

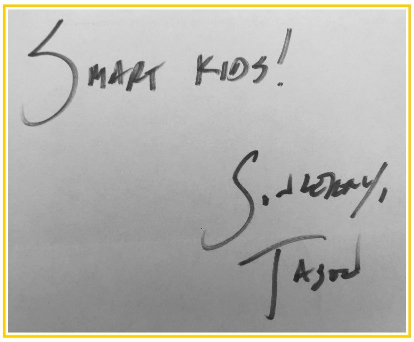
(3) **Social Media Outreach** – Even though email has proven very effective for IPRO in the past, more and more information is being disseminated via social media. For example, one of our current IPRO members runs both the Instagram and Twitter accounts for another University organization. Through the Honors Teaching Practicum we will give this student the opportunity to do the same for IPRO.

Although we are excited to further develop IPRO, we want to make sure we remain focused on our core mission: undergraduate research. The University of Iowa has many exceptional students and we want IPRO to be a place where those students can come together and research important policy issues facing our state. By better integrating past IPRO members into current IPRO curriculum, we will be able to face this challenge head on and in doing so create a sustainable education and research framework.

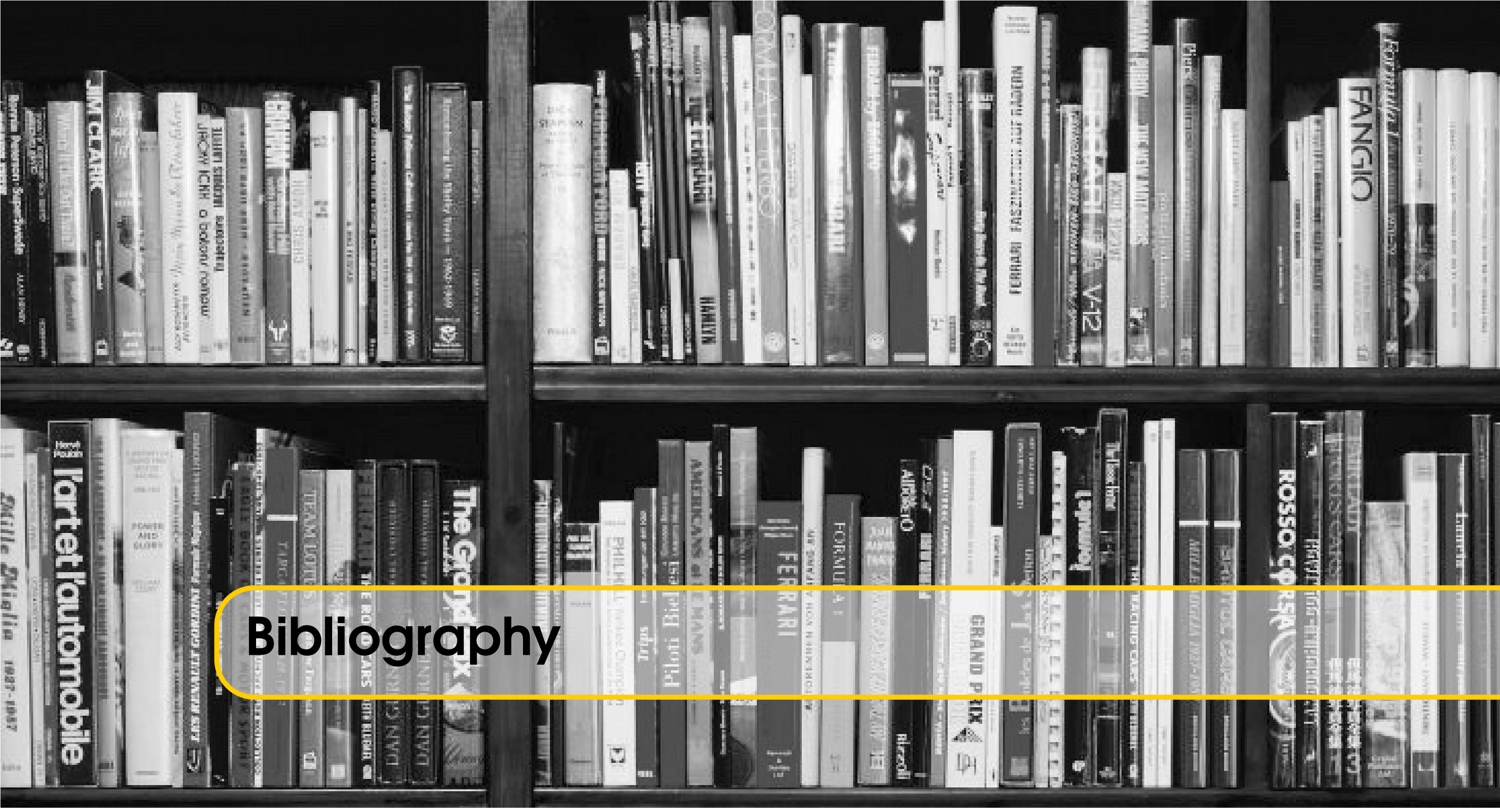
7.2 IPRO 2025-2030

IPRO's original mission was to produce usable research for the state legislature. We think attending the *Hawkeye Caucus Day* and producing the *Hawkeye Policy Report* are important first steps, but we also think more needs to be done. For example, the former gives us an opportunity to meet legislators in Des Moines while simultaneously building IPRO's research reputation through meaningful one-on-one interactions. However, we must begin fostering ongoing legislative relationships that do not begin and end on a single day. These relationships will not only produce valuable topics for our research endeavors, but they will also raise the public profile of IPRO as an organization.

The *Hawkeye Policy Report* achieves a similar end by providing a high-quality publication that legislators and other policy-makers can physically read. This is a major step forward for IPRO as an organization, but more steps need to be taken. For example, our current dissemination plans involve emailing legislators. This too is difficult to sustain since such emails are often ignored or forgotten. By increasing the outward facing profile of IPRO, we hope to bring readers to us, rather than the other way around. In doing so, we hope to highlight extraordinary undergraduates at the University of Iowa while simultaneously becoming a focal point for policy research more broadly within the state.



Jason Kander was kind enough to visit IPRO when he spoke with the College Democrats about his organization "Let America Vote." We think this excerpt from a note he wrote to us encapsulates what IPRO is as an organization. IPRO really is a group of exceptionally smart kids! Every since our founding, this is precisely what IPRO provides our members and those who request our services. We are the best and brightest students at the University of Iowa. IPRO gives us the ability to apply our skills to address important policy issues while simultaneously serving as representatives for the University as as whole. The 2017-2018 iteration of IPRO had many successes and we thoroughly look forward to many more in the future! Please let us know what IPRO can research for you!



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