Iowa's Targeted Jobs Withholding Tax Credit Program

Evaluation Study

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Preface

During the 2005 Legislative Session the Iowa Department of Revenue received an appropriation to establish the Tax Credits Tracking and Analysis Program to track tax credit awards and claims. In addition, the Department was directed to assist the legislature by performing periodic economic studies of tax credit programs. This is the second evaluation study completed for the Iowa Targeted Jobs Withholding Tax Credit Program.

As part of the evaluation, an advisory panel was convened to provide input and advice on the study's scope and analysis. We wish to thank the members of the panel:

Paul Stueckradt	Iowa Economic Development Authority
Lisa Connell	Iowa Economic Development Authority
Myron Linn	Iowa Workforce Development
Robert Palmer	Iowa League of Cities
Biswa Das	Iowa State University
Liesl Eathington	Iowa State University
Peggy Steffensmeier	City of Fort Madison
Chris Myres	City of Sioux City
Brenda Carrico	City of Council Bluff
Stephanie Stuecker	City of Burlington
Aaron Burnett	City of Keokuk

The assistance of an advisory panel implies no responsibility for the content and conclusions of the evaluation study.

This report was also reviewed by Angela Gullickson and Amy Rehder Harris. This study and other evaluations of Iowa tax credits can be found on the Tax Credits Tracking and Analysis Program Web page on the Iowa Department of Revenue website.

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Executive Summary

The Iowa Targeted Jobs Withholding Tax Credit Program (TJC) was enacted in tax year 2006 to help border cities attract and retain businesses. The tax credit is awarded to businesses for relocating to Iowa, creating new jobs or retaining existing jobs, or making capital investment in one of the pilot project cities. The tax credit is equal to three percent of the gross wages paid by the business to each employee filling those eligible new or retained jobs. The eligible business claims the tax credits on quarterly withholding tax returns and then diverts the same amount of funds to the pilot project city. The city spends the diverted withholding taxes on urban renewal projects related to the business or provides the funds to the business to reinvest.

The pilot project cities enrolled in this program include Sioux City (bordering South Dakota and Nebraska), Council Bluffs (bordering Nebraska), Burlington, Fort Madison, and Keokuk (all bordering Illinois).

Other States' Comparable Job Creation Tax Credits for New Jobs

- There are seventeen states that have job creation tax credit programs that are not limited by the business' tax liability, require job creation and are a function of the payroll associated with those new jobs. Among Iowa's neighboring states, Illinois, Missouri, and Nebraska currently offer a comparable tax credit programs.

Targeted Jobs Withholding Tax Credit Program Awards

- Between FY 2007 and FY 2017, 66 Targeted Jobs Tax Credit awards have been made. Those awards total $47.5 million and have been awarded under contracts that have already closed successfully or remain ongoing.

- Sioux City has both the highest number of awards, 50, and the largest aggregate awards, $25.8 million. Fort Madison had the second highest aggregate awards at $9.5 million while Council Bluffs had the smallest aggregate awards at $2.4 million.

- The manufacturing industry has received the highest share of TJC awards (57.3%) followed by the healthcare industry (18.4%).

- Based on projects awarded through FY 2017, businesses that have been awarded tax credits have pledged capital investments totaling $755.9 million. Those projects have also included 1,545 new jobs and 2,636 retained jobs. A retained job is defined as a job at risk of elimination if the project for which the employer is seeking assistance does not proceed.

Targeted Jobs Withholding Tax Credit Program Claims

- Between FY 2007 and FY 2017, $27.5 million of tax credits have been claimed by businesses that have received tax credit awards.

- Businesses with TJC agreements in Sioux City have claimed the most withholding credits totaling $11.9 million (43.1% of all claims).

- About 60.3 percent of the final TJC awards made between 2007 and 2016 have been claimed to-date.

Economic Analysis of the Targeted Jobs Withholding Tax Credit Program

- A case study on the healthcare industry in Sioux City and neighboring counties shows that the Targeted Jobs Withholding Tax Credit Program has helped the city maintain job growth in that industry, but it was not enough to prevent Iowa from falling behind on healthcare job growth compared to South Dakota.

- Employees at businesses participating in the Targeted Jobs Withholding Tax Credit Program experienced an annual wage increase 1.48 percent faster than employees in nonparticipating businesses. It is also estimated that 46.8 percent of tax incentives claimed by participating businesses flow back to their employees.

I. Introduction

The Iowa Targeted Jobs Withholding Tax Credit Program (TJC) was enacted during the 2006 Iowa Legislative session. The program allows Iowa border cities to compete with cities in neighboring states by offering tax credits for existing and new businesses who commit to making investments and retaining or creating new jobs.

The purpose of this evaluation study is to analyze tax data and other related pertinent information in order to assess the TJC program in terms of its utilization and economic impact. This is the second evaluation study completed by the Iowa Department of Revenue (IDR) evaluating this program; the first was completed in 2012 based on the review schedule specified in Iowa Code Section 2.48.

Section II describes the program details. Related literature on similar tax incentive programs are discussed in Section III. A selection of other states' similar income tax credit programs promoting job creation are summarized in Section IV. Section V provides descriptive statistics of TJC awards and claims. Section VI considers the economic impacts of the TJC program through a case study of the health care industry in the Sioux City area and the tax incidence of the TJC claims. The study concludes in Section VII. The details of the statistical regression are discussed in the Appendix.

II. The Iowa Targeted Jobs Withholding Tax Credit Program

A. Description of the Targeted Jobs Withholding Tax Credit Program

The Iowa Targeted Jobs Withholding Tax Credit Program was enacted during the 2006 Iowa Legislative session and became effective on July 1, 2006.[1] The goal of the program is to help Iowa border cities compete for jobs with cities in neighboring states by retaining existing businesses as well as attracting new business investment. The legislation allowed for four pilot project cities, each of which must contain three or more census tracts, subject to approval by the Iowa Economic Development Authority (IEDA). One city was required to be in a county bordering South Dakota, one city in a county bordering Nebraska, and two cities in counties bordering a state other than South Dakota or Nebraska. Current pilot project cities include: Sioux City (borders South Dakota and Nebraska), Council Bluffs (borders Nebraska), Burlington (borders Illinois), and Keokuk and Fort Madison (borders Missouri and Illinois) (see Figure 1). Based on the 2010 census, the population of Sioux City was 82,678, 62,230 in Council Bluffs, 25,663 in Burlington, 11,051 in Fort Madison, and 10,780 in Keokuk. After a program change in 2007, Keokuk and Fort Madison (located in Lee County) were together designated as the final pilot project city; because Lee County has a total population fewer than 45,000 (35,862 in the 2010 census), the Legislative change allowed the two to be considered as one pilot project city.

Under the program, a pilot project city and IEDA enter into a withholding agreement with an eligible business to invest and create, or retain jobs, within city limits for a period of

[1] The program is authorized under Iowa Code 403.19A.

up to ten years. An eligible business is an enterprise located in or relocating into Iowa operated for profit and under single management. The Targeted Jobs Withholding Tax Credit equals three percent of the gross wages paid by the business to each employee filling targeted jobs. Targeted jobs include new or retained jobs resulting from established out-of-state businesses that are moving to Iowa or existing Iowa businesses expanding in Iowa that pay a wage equal to or above the countywide average wage as calculated by the Iowa Workforce Development. The eligible business claims the tax credit on quarterly withholding returns filed during the agreement period and then diverts the same amount of funds to the pilot project city. The diverted withholding taxes must be used or pledged by the pilot project city for a project related to the employer pursuant to the withholding agreement.

Each quarter, eligible businesses claim the withholding tax credit and then remit the same amount of funds to designated accounts established by pilot project cities. If the amount of withholding due for employees in targeted jobs is less than three percent of the gross wages paid, the employer can claim the credit against other withholding taxes due that tax period or may carry the credit forward for up to ten years. The tax credit is not refundable and not transferable. Those employees whose wages are subject to the TJC receive full credit for the amount withheld from their paychecks when filing their individual income tax returns. The following section uses an example to illustrate the general award and claim process.

The program is available to both businesses already in pilot project cities and businesses relocating from other states. Eligible businesses under the Targeted Jobs Withholding Tax Credit Program include professional services or industrial enterprises, such as medical treatment facilities, manufacturing facilities, corporate headquarters, and research facilities. Since 2012, government entities are ineligible for the program. In addition, retail businesses and businesses that close or substantially reduce operations in another part of the state are ineligible.

Qualifying investment means a capital investment in real property including land and existing buildings, site preparation, building construction, long-term lease costs, or a capital investment in depreciable assets. A pilot project city arranges for matching local financial support for the project from a private donor, the business, or the city. The local match required is one dollar for every dollar of withholding tax credit received by the pilot project city. If the project, when completed, will increase the amount of an employer’s taxable capital investment by an amount equal to at least ten percent of the amount of withholding tax credit dollars received by the pilot project city, then the pilot project city must contribute at least ten percent of the local match. A pilot project city’s contribution to the local match may include the dollar value of any property tax abatement provided by the city to the business for new construction.

In the withholding agreement, pilot project cities, IEDA, and businesses establish the projected number of jobs to be created or retained before the contract expires. Following an 18-month performance period, beginning on the date the withholding agreement is approved, if IEDA determines that the employer has not met the requirements of the withholding agreement relating to retaining jobs, if applicable, the agreement shall be terminated by IEDA and the pilot project city and the business is no longer eligible for withholding tax credits. Following the three-year performance period, if IEDA determines that the employer has not met or is incapable of meeting the requirements of the withholding agreement relating to creating jobs, if applicable, or relating to the qualifying investment prior to the end of the withholding agreement, IEDA may reduce future credits allowed under the agreement or negotiate with the other parties to terminate the agreement early.

B. Legislative History of the Targeted Jobs Withholding Tax Credit Program

Since enactment in 2006, the program has been modified in five subsequent Legislative sessions. At enactment, the program was limited to four pilot project cities and required an existing business to create new jobs to be eligible. The business and pilot project city signed withholding tax credit agreements with estimated award amounts allowing claims for ten years and the program had a sunset date of June 30, 2010. During the 2007 Iowa Legislative session, the definition of the pilot project city was modified. If two eligible cities are approved which are located in the same county and the county has a total population of fewer than 45,000, the two approved eligible cities are considered one pilot project city. This allowed the inclusion of Keokuk and Fort Madison, as noted above.

During the 2009 Iowa Legislative session, several changes to the TJC program were enacted. A requirement was added, for contracts signed on or after July 1, 2009, that the maximum amount of withholding tax credits awarded must be specified on the withholding agreement and cannot exceed the qualifying investment. IEDA was authorized to deny approval of a withholding agreement if it determines the agreement does not meet the statutory requirements of the program. The pilot project cities were prohibited from using the program’s incentives to compete for jobs against other Iowa cities. Pilot project cities were also required to submit an annual report to IEDA detailing the amount of payments received under the withholding agreements, jobs created and retained, and investment undertaken by the employer. Finally, the program’s sunset date was extended to June 30, 2013.

During the 2011 Iowa Legislative session, the program was expanded to award credits to businesses for only retained jobs. Although originally businesses were required to create jobs to be eligible for TJC, those businesses could also receive tax credits for retained jobs. This change allowed business with only retained jobs to be eligible. A “retained job” means a full-time equivalent position in existence at the time an employer applies to the authority for approval of a withholding agreement that remains continuously filled but is at risk of elimination if the project for which the employer is seeking assistance under the withholding agreement does not proceed.

During the 2012 Iowa Legislative session, the definition of an eligible business was tightened by explicitly excluding government entities from the program. During the 2013 Iowa Legislative session, the requirement that the employer to be located within an urban renewal area was eliminated and the expiration date of the program was extended to June 30, 2018. In addition, legislators increased IEDA's oversight of the program. IEDA became a party to all TJC agreements and all agreements required IEDA Board approval. The cities and IEDA were given the ability to negotiate the amount and length of the agreement. Finally, IEDA became responsible for assessing compliance of retained jobs after 18 months and created jobs and investment after three years.

Since the last Legislative change, the IEDA Board must approve any agreement negotiated between a pilot project city, IEDA, and an eligible business,. Once the city receives approval from the Board, the agreement can be signed with the business. At that point, IEDA sends a copy of the fully executed agreement and documentation that all award terms are satisfied as notification to the Iowa Department of Revenue. IDR then makes it possible for the business to make TJC claims on quarterly withholding tax returns. Pilot project cities and businesses are also required to provide annual reports on project progress to IEDA.

Originally, the tax credit amount reported in the withholding agreement was an estimate of tax credits based on the expected job creation. Therefore, if the number of jobs created or wages paid exceeded those expectations, businesses could claim tax credits that exceeded the amount in the agreement.

Effective for agreements signed in fiscal year 2010 or later, the tax credit award amount in the agreement limits the aggregate amount of tax credits that can be claimed over the life of the agreement. Thus, businesses cannot claim tax credits for jobs that exceed the projected jobs number in the agreement. The average county wage threshold used in the agreement to determine qualifying jobs does not change during the life of the agreement, even if the new jobs are created several years after the withholding agreement is signed and the average county wage threshold has changed.

C. An Hypothetical Example of a Targeted Jobs Withholding Tax Credit Project

Because the rules surrounding the job and investment requirements, matching, and compliance are complex, the following example will hopefully clarify those rules.

A hypothetical healthcare business already located in a pilot project city plans to make an investment of $1.5 million expanding its office space. The investment includes the cost of purchasing an adjacent lot, preparing the site, and constructing the additional space alongside the existing building. With the expansion the business pledges to create 5 new jobs and retain the 15 existing jobs with an average hourly wage of $20. Without that investment, the business indicates it would close the location in the pilot project city and relocate in a neighboring state, thus eliminating all jobs at the business.

It is established that no other Iowa city is competing with the pilot project city for this business, thus the business is eligible for the TJC program.

The average annual salary of each pledged created and retained job is $42,400. During negotiations between the business, pilot project city, and IEDA, it is established that the total eligible TJC Tax Credits per award year is $1,272 per job, or 3 percent, which totals $25,440 for all 20 pledged jobs. The agreement length was negotiated for five years, thus the total TJC award would be $127,200.

The pilot project city needs to arrange $127,200 to meet the required dollar for dollar local match funding under the TJC project. It is calculated that the completed TJC project will increase the property tax revenue from the business by $13,000, which is more than 10 percent of the award amount ($12,720). Given that estimate, the pilot project city needs to provide at least 10 percent of the $127,200 in required local matching funds from the pilot project city's own funds. The pilot project city offers a five-year property tax abatement worth $3,000 per year. The remaining local match funding, $112,200, is met by the awarded healthcare business through the $1.5 million investment.

IEDA assesses the economic impact of the proposed investment project based on the submitted information and makes a recommendation on the TJC agreement to the IEDA Board. If the Board approves the TJC agreement for the proposed project, IEDA prepares the legal documents and a contract for the business, IEDA, and the pilot project city to sign, defining conditions, responsibilities, and benefits under the TJC program.

Notice of the withholding agreement is provided to IDR following its execution. IDR designates the business as eligible to make tax credit claims on withholding tax returns during the five years under the contract. The business claims TJC tax credits ($6,360 each quarter) on their withholding tax return and submits the $6,360 to the pilot project city. The pilot project city sends the funds back to the business to use on the project. Note that any project costs covered with the State withholding tax credits do not count toward the local match. During the five-year contract period, the business must complete an annual report for IEDA detailing investment and job information as of June 30 of each year.

In the withholding agreement, the pilot project city, IEDA, and business establish that five new jobs will be created and 15 existing jobs will be retained before the contract expires. Following the 18-month performance period, if IEDA determines that the business did not retain the 15 jobs, the agreement shall be terminated by IEDA and the pilot project city.

Following the three-year performance period, if IEDA determines that the business did not create the five jobs pledged in the agreement or retain the 15 pledged jobs, future benefits to the business under the agreement may be reduced or IEDA may negotiate with the other parties to terminate the agreement early.

D. Experiences of Pilot Project Cities

Discussions with economic development staff and program administrators in the five pilot project cities revealed that they consider the program a helpful tool in attracting or retaining businesses over the last decade. The discussion covered both the usage of the program and the impact of changes to the program over time in meeting the goal of keeping and recruiting businesses and jobs in Iowa.

Sioux City noted that the change in 2013 that removed the requirement that participating businesses be located in an urban renewal area (URA) did not have much impact on eligibility given that most of the interested businesses are located in URAs. Council Bluffs noted that the change did have an impact on their usage. The city does not have a lot of URA property such that some projects previously struggled to find an eligible location.

All of the cities noted that the program was helpful, serving as one incentive supporting the cities in the business investment decision. Sioux City, the pilot project city that has completed the largest number of agreements, noted that the program was initially used to attract healthcare providers in direct competition with South Dakota. More recently, the program incentives have been used to attract investment by manufacturers, competing with states across the nation.

The program is considered part of the toolbox at the disposal of cities and EDA working together to increase development in the state. City representatives noted that the withholding tax credit available under the program is more attractive to businesses than the investment tax credit offered under other State programs because it can be claimed quarterly and does not require the business to have income tax liability to benefit. Keokuk attributes two significant projects to the program, one which established a business in a facility that otherwise would have remained vacant. Council Bluffs also noted that the program was critical for retention projects.

Keokuk noted that many employees working in positions retained by businesses under the TJC live in Missouri and Illinois, but earn and spend money in Iowa. The city used the program to support an expansion of a large, global employer, and a smaller, regional business. Burlington noted that there is no border city in Illinois, the businesses that have used the program as an incentive to stay in Iowa were looking to locate not in Illinois, but in many other states around the nation. Fort Madison also noted that the program was helpful in keeping businesses and jobs in the region.

The city representatives also noted that the change in 2013 to more directly involve IEDA in the negotiation with businesses resulted in beneficial changes. The negotiations changed from formulaic determination of the tax credit award (jobs times wages times 3%) to a consideration of return on investment for the State. IEDA staff were able to offer businesses incentive packages that incorporated other State incentives alongside TJC, including High Quality Jobs tax credits, grants, and loans. The IEDA review and Board approval also resulted in a shortening of many agreements from the maximum offered in the Code, reducing costs to the State.

III. Other States' Comparable Job Creation Tax Credit Programs

A. Comparable Programs Across the Country

Many states have incentive programs that offer tax credits to businesses to invest in the state and create jobs (see Table 1). New Jersey is the only other state with a tax credit program that is limited to border cities. The only qualified city is Camden, which is located on the Pennsylvania border. The Qualified Municipality Open for Business Incentive Program awards businesses tax credits equal to $2,500 in the first year and $1,250 in the second year for each new job created in qualified cities. Unlike Iowa's TJC, the New Jersey tax credits are claimed against corporate income tax liability, are nonrefundable, and can be carried forward for five years.

To narrow the scope of this comparison to other states' incentive business incentive programs, those most similar to the Iowa Targeted Jobs Withholding Tax Credit Program were chosen based on three conditions: 1. whether the tax credit program is refundable or otherwise not limited by the business's income tax liability; 2. whether the tax credit program includes a jobs component; and, 3. whether the tax credit is calculated as a percentage of the payroll of the associated jobs. Seventeen states have at least one program that meets these three conditions.

Seventeen states, including Iowa, offer tax credits to businesses conditioned on the number of qualified jobs and calculated as a percentage of the payroll of those jobs.[2] Most states require businesses to create a minimum number of new jobs in order to be eligible for the tax credit. To be eligible for the highest tax credit rates offered, both Kansas and Missouri require high impacted businesses to create at least 100 new jobs, the highest among the states. As noted above, Iowa requires businesses to be located in a pilot project city or to relocate to one of the pilot project cities in Iowa, create at least ten new jobs, or invest at least $500,000 and retain jobs to be eligible for the Targeted Jobs Withholding Tax Credit.

Nine states specify that the new jobs must meet certain wage criteria to qualify for tax credits under their programs.[3] Oklahoma's 21st Century Quality Jobs Incentive Act requires each business to create jobs with at least 300% of the county minimum wage in Oklahoma to be eligible, which is the highest percentage required among these nine programs. Nebraska's program includes some created jobs with at least 60% of the state average wage as eligible jobs. Missouri's program allows some created jobs with at least 80% of the county average wage in Missouri to be eligible. The TJC program in Iowa requires businesses to create jobs with wages meeting or exceeding 100% of the county average wage.

Seven states use a tier system to assign different tax credit rates to eligible businesses based on location, wage, industry, or the number of new jobs created.[4] In Georgia and New Jersey, the award amount for each qualified job is fixed and does not depend on

[2] These states are Alabama, Arkansas, Georgia, Illinois, Iowa, Kansas, Louisiana, Missouri, Nebraska, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, South Carolina, and Utah.
[3] These states are Arkansas, Georgia, Iowa, Louisiana, Missouri, Nebraska, New Mexico, Ohio, and Oklahoma.
[4] These states are Arkansas, Georgia, Kansas, Louisiana, Missouri, Nebraska, and South Carolina.

the wage level. Eight states, including Iowa, calculate the tax credit using a single rate applied to the annual or quarterly payroll of new jobs created.[5] Alternatively, North Dakota offers a tax credit equal to 1 percent of payroll in the first three years and 0.5 percent in the next two years and New Jersey offers a fixed dollar amount of tax credit per job.

New Mexico offers the highest payroll tax credit rate of 10 percent compared to Iowa's TJC payroll tax rate of three percent on targeted jobs. Three states, Ohio, South Carolina, and Utah, calculate tax credits as a percentage of the new employees' state withholding, or payroll taxes, rather than the wages on which the taxes are calculated.

Thirteen states specify industries that are qualified or not qualified for their payroll tax credits (see Table 2).[6] For example, Iowa excludes retailers and government entities. Five states, not including Iowa, have specified a maximum amount of payroll tax credits that any business can claim per year.[7] However, Iowa's program limits overall claims by specifying a total benefit maximum over the life of each project. Missouri ($106 million for 2016 forward) and Kansas ($6 million for job expansion and up to $2.4 million for job retention) have an annual statewide cap on their programs.

Most states allow eligible businesses to claim tax credits for more than one year, with that time span referred to as the benefit period. Eleven states including Iowa have a maximum benefit period of ten years or more.[8] Ohio's maximum benefit period is 15 years, the longest among all states. New Jersey credits are only available for two years. If businesses fail to meet the conditions in their agreements, Arkansas, Iowa, Nebraska, and New York have a clawback provision in their tax credit agreements allowing the state to recapture tax credits. In Iowa, EDA issues a default to recapture tax credits generally in proportion to the business's actual performance in regard to job creation/retention or investment compared to the promised performance if the fundamental eligibility requirements of the program are still met.

B. Tax Incentive Programs in Neighboring States

Four states border Iowa pilot project cities. Among these four states South Dakota does not have an income tax while the other three states (Nebraska, Missouri, and Illinois) all have payroll tax credit programs.

The Nebraska Advantage Act categorizes businesses into six tiers based on investment and projected job creation:

- Tier 1: $1 million new investment and 10 new jobs;
- Tier 2: $3 million new investment and 30 new jobs;
- Tier 3: 30 new jobs;

[5] These states are Alabama, Illinois, Iowa, New Mexico, New York, Ohio, Oklahoma, and Utah.
[6] These states are Alabama, Arkansas, Illinois, Iowa, Kansas, Louisiana, Missouri, Nebraska, New York, North Dakota, Oklahoma, South Carolina, and Utah.
[7] These states are Kansas, Missouri, New Mexico, South Carolina, and Utah.
[8] These states are Alabama, Arkansas, Illinois, Iowa, Kansas, Louisiana, Nebraska, New York, Ohio, Oklahoma, and South Carolina.

Tier 4: $10 million new investment and 100 new jobs;
Tier 5: $30 million new investment;
Tier 6: $10 million new investment and 75 new jobs, or $100 million new investment and 50 new jobs.

For a business in Tier 1 through Tier 4, the payroll tax credit rate, which rises as wages rise, is equal to:

Three percent of the annual payroll of new employees if the average wage of new employees equals at least 60 percent of the Nebraska average annual wage;
Four percent if the average wage equals at least 75 percent of the Nebraska average;
Five percent if the average wage equals at least 100 percent of the Nebraska average; or
Six percent if the average wage is at least 125 percent of the Nebraska average.

Employees with an annual salary more than $1 million are excluded from the calculation of the average new employee wage. For a business in Tier 6, the tax credit rate is ten percent of annual payroll of new employees. Without new employees, Tier 5 businesses are not eligible for a payroll tax credit.

In addition to the payroll tax credit, businesses in Tier 1 can claim an investment tax credit of three percent of the investment. Businesses in Tier 2 or Tier 4 can also claim an investment tax credit equal to ten percent of investment, a refund of the sales tax paid for qualified capital purchases, and a property tax exemption. Tier 5 businesses can claim a refund of sales tax paid for qualified capital purchases and a property tax exemption. For businesses in Tier 6, the investment tax credit rate is fifteen percent. Businesses in Tier 6 may also be eligible for a refund of the sales tax paid for qualified capital purchases and a property tax exemption.

Nebraska businesses in Tier 1, Tier 3, or Tier 6 have a maximum benefit period of ten years. Businesses in Tier 2, Tier 4, or Tier 5 have a maximum benefit period of seven years. Industry qualifications also differ among the tiers. Investment tax credits in the Nebraska Advantage Act are nonrefundable. Credits may be carried forward nine years after the year of application for a Tier 1 or Tier 3 business, fourteen years for a Tier 2 or Tier 4 business, or ten years for a Tier 6 business. If businesses fail to meet the requirements during the benefit period, the tax credits claimed can be recaptured by the Nebraska Department of Revenue.

Claims to the Nebraska payroll tax credit are kept by the business, while amounts claimed under the Iowa TJC must be remitted to the pilot project cities. However, as noted above, it is the practice of the Iowa cities to then return the payments to the businesses for investment in the project.

Businesses are required to create a minimum number of new jobs to receive payroll tax credits under the Nebraska Advantage Act. Businesses do not have to meet the minimum number of new jobs requirement of ten to be eligible for the Iowa TJC under any of the following conditions:

- The business relocates to pilot project cities from other states;
- The business is already located in Iowa and makes new investment of at least $500,000 in pilot project cities; or
- The business is already located in Iowa and retains at least ten existing jobs.

Missouri has the Missouri Works program that targets businesses in its Enhanced Enterprise Zones, rural zones, and other areas in Missouri. To be eligible for this tax credit, businesses in the Enhanced Enterprise Zones are required to create at least two new jobs paying at least 80 percent of the county average wage and make $100,000 of new investment. If the business is located in a rural area, then it needs to create at least two new jobs paying at least 90 percent of the county average wage and make $100,000 of new investment. For other areas, businesses need to create at least ten new jobs paying at least 90 percent of the county average wage. Large projects require businesses to create at least 100 new jobs paying at least 120 percent of the county average wage. The program excludes gambling, retail trade, food and drinking places, public utilities, educational services, religious organizations, and public administration companies.

The Missouri Works program awards tax credits equal to 100 percent of the individual income tax withheld for new employees of eligible businesses. The benefit period is five or six years. The tax credit issued under the Missouri Works program is refundable. Beginning in 2016, the annual statewide limit on tax credit awards is $106 million.

The Illinois Economic Development for a Growing Economy (EDGE) Credit, available through April 30, 2017 and extended again in September 2017, offers a negotiable percentage of payroll of new jobs to businesses for up to ten years.[9] The credit requires a business to make an investment of at least $5 million in capital improvements and create a minimum of 25 new full-time jobs in Illinois. For a company with 100 or fewer employees, the company must agree to make a capital investment of $1 million and create at least five new full-time jobs. Businesses in retail trade and personal service are not qualified for the credit. This credit has no clawback provision, and cannot be carried forward.

IV. Literature Review

Recent academic studies on general job creation tax incentives show mixed conclusions. Chirinko and Wilson (2016) used a difference-in-differences model on monthly state employment data between 1990 and 2010 to compare outcomes in states with job creation tax credits and states without job creation tax credits. They estimated that the job creation tax credits improved the states' employment growth rates by 0.8

[9] https://www.illinois.gov/dceo/ExpandRelocate/Incentives/Pages/EDGE.aspx - EDGE was extended effective September 2017.

percentage points. Also, over a three-year period, for every one dollar of job creation tax credit expenditures, economic output was estimated to increase by $1.66.

Cahuc, Carcillo, and Le Barbanchon (2014) used employment data in France with a difference-in-differences model to examine the impact of job creation tax credits on employment growth during the recession period. Their results showed that for small companies with 0 to 14 employees, job creation tax credits increased employment by 0.21 jobs per company in 2009.

Neumark and Grijalva (2015) examined the effectiveness of state job creation tax credits accounting for specific provisions in the administration of the programs. They used a difference-in-differences model on employment data at the state and industry level between 1995 and 2011 to estimate the impact of the tax credits on employment growth. Their results showed no evidence of a positive effect of the job creation tax credits on employment when only the existence of the tax credits was considered. However, when additional details were considered, such as whether the job creation tax credit program allowed recapture if the businesses did not meet the program requirements, if the credits were refundable, and if the program was targeted toward unemployed residents, there was evidence that job creation tax credits improved employment growth.

Jensen (2014) analyzed the impact of Kansas's Promoting Employment Across Kansas program on employment. He used the propensity score method to select the most similar control group of non-participating firms for the analysis. Comparing employment at the participating firms and the non-participating firms, the author found no statistically significant correlation between the participation in the Promoting Employment Across Kansas program and employment growth at the participating firms.

There is also a line of literature focusing on the incidence of the tax incentives, though few studied state payroll tax credits similar to the TJC program. A recent study in France (Carbonnier, et. al, 2017) used differences-in-difference models to estimate the tax incidence of France's refundable tax credit based on the wage bill introduced in 2013. The authors found little evidence that the tax credit improved employment in France, but their results showed that wages increased significantly because of the tax credit. Estimates of the incidence of the tax credits was that about 50% was realized by employees through higher wages.

Other related literature are reports completed by other state agencies discussing their business incentive program. Only a few states have attempted to assess the economic impact of the job incentive programs, most simply provide details about the incentivized projects and the direct impacts associated with tax credit awards. The South Carolina Revenue and Fiscal Affairs Office (2016) conducted a review of all the state's business incentives including a cost-benefit analysis of the Job Development Credit. The analysis showed that between 1995 and 2014, the Job Development Credit cost totaled $75.5 million in tax credit claims with a benefit of 81,041 direct, created jobs. Including the spillover impacts as benefits increased the total job gain to 215,478, total investment growth to $47.6 billion, and the total increase in economic output to $228.3 billion between 1995 and 2014.

Among Iowa's neighboring states, Nebraska and Illinois have recently reported on their similar programs. The Nebraska Department of Revenue's report on the Advantage Act (Nebraska, 2016) notes that in 2016, 47 projects were awarded $78 million in tax credits to projects associated with $2.3 billion in investment and 5,630 new jobs. Illinois's 2016 annual report on its EDGE program (Illinois, 2016) noted that $1.5 billion of total tax credits were awarded between 1999 and 2016 to 859 projects. Those projects created 37,122 jobs and retained 48,731 jobs between 1999 and 2016.

V. Targeted Jobs Withholding Tax Credit Program Award and Claim Statistics

A. Targeted Jobs Withholding Tax Credit Program Awards

Across all pilot project cities, a total of $54.1 million of Targeted Jobs Withholding Tax Credits were awarded on the initial agreements signed between FY 2007 and FY 2017 (see Table 2). The total amount of TJC awards made on the initial agreements each year grew from $0.8 million in FY 2007 to $15.7 million in FY 2011.[10] Awards dropped to $1.2 million in FY 2016. Between FY 2007 and FY 2017, 72 TJC agreements were initiated. The fiscal year associated with each project reflects the year when the tax credit certificate number was issued to the business and the award was reported to IDR and not necessarily the year in which the EDA Board approved the initial agreement.

Some awarded businesses did not proceed to participate in the TJC program after negotiating the initial agreements; as a result, these agreements were terminated before the business could claim any tax credits. Excluding these five businesses, 66 Targeted Jobs Withholding Tax Credit agreements, defined as final awards, have proceeded, totaling $47.5 million in TJC awards through December 2017. For fiscal year 2017, there is also one agreement close to be final. These 66 awards include a small number of agreements where the business did not meet the job creation or retention goals and terminated early after making some claims.

Businesses signing TJC agreements pledged capital investment totaling $755.9 million between 2007 and 2017, including only those agreements noted above as final (see Table 3). The pledged capital investment peaked in 2008 at nearly $360 million due to a single project. The total number of pledged new jobs over the 66 projects totaled 1,545 while pledged retained jobs totaled 2,636. Retained jobs comprise 63 percent of associated jobs and are mostly included in the agreements issued before 2015. The average TJC tax benefits awarded per pledged job over the life of the program is $11,372, less than one-third of the $41,797 measured for Iowa's High Quality Jobs Program (Jin, 2016). Recall that the awarded benefits are claimed over the life of the agreement, lasting between five to ten years, beginning when the job is created or as

[10] IDR determined the fiscal year of the award based on the date that IDR received the notification of the final TJC certificate. That date could be different from the starting date or the signing date of the TJC agreement.

long as the job is retained. Average tax credits awarded per pledged job ranged from only $7,161 in 2008 to $17,794 in 2012.

Among the pilot project cities, Sioux City has the largest number of initial agreements totaling $25.8 million through FY 2017 (see Table 4). All of the businesses that signed agreements but did not proceed were located in Sioux City. Excluding those agreements, the total final awards issued for businesses in Sioux City is $19.2 million, accounting for 40.4 percent of all awards. Fort Madison has the second highest amount of awards with $9.5 million, accounting for 19.9 percent of all awards. Council Bluffs has the smallest total awards at $2.4 million, accounting for just 5.1 percent of the total.

Participating businesses in Council Bluffs had the highest pledged investment, $300.6 million, nearly half of the all pledged investment, due to a single capital-intensive project (see Table 5). The total pledged capital investment from participating businesses in Burlington was $201.1 million, the second highest amount. The highest number of pledged new jobs was 656 in Fort Madison with 525 in Sioux City as the second highest. The highest total number of pledged retained jobs was 1,027 in Sioux City with and 558 in Keokuk as the second highest. Average tax credits awarded per pledged job in Fort Madison is just under $8,500 (and the count average wage for Lee County was $45,450 which was the highest among counties where pilot project cities are located), the lowest among the pilot project cities. The highest average tax credits awarded per pledged job is $16,738 for Council Bluffs, while the county average annual wage for Pottawattamie County, was $38,948, the lowest among all counties where pilot project cities are located.

Participating businesses in manufacturing signed 20 TJC agreements, which was the highest among all industries (see Table 6). The total awards issued to participating businesses ($27.2 million) in the manufacturing industry accounted for 57.3 percent of total awards for all businesses. Participating businesses in the healthcare industry were awarded $8.8 million, about 18.4 percent of total awards. Although businesses in the retail industry are not eligible for TJC, the one agreement listed under the retail industry reflects investment in a warehouse business, not a retail store.

B. Targeted Jobs Withholding Tax Credit Program Claims

From CY 2007 through the first quarter of CY 2017, a total of $27.5 million of Targeted Jobs Withholding Tax Credits have been claimed by businesses on 1,176 quarterly withholding returns (see Table 7). The total amount of claims made on withholding returns grew from $171,372 during 2007 to $5.0 million during 2016. The count of claims made each year grew from 14 in 2007 to 190 in 2016.

As noted in the program description, the amount of TJC a company can claim is determined by the number of targeted jobs and the wages paid to those jobs each quarter. For all awards proceeding beyond the initial agreement, about 60.3 percent of awards have been claimed (see Table 8). Companies with awards from 2007 have claimed about 119.9 percent of their awards. One reason why the total claims exceed the total awards for the first program year is, as discussed in Section II, the award amount was an estimated tax credit award amount that companies expected to claim based on their pledged job creation and investment. Since FY 2010, the award amount in the agreement is the maximum potential tax credits available for companies to claim.

Companies in Sioux City made 852 claims, totaling $11.9 million (43.1%), the highest number among all pilot project cities (see Table 9). Companies in Council Bluffs made 51 claims, totaling $0.7 million (2.7%), the lowest number among all cities. Participating companies in Burlington had claimed about 82.1 percent of the received awards, higher than participating companies in other cities. Participating companies in Council Bluffs had claimed only 30.3 percent of the received awards, the lowest share among cities.

For awards made between 2008 and 2016, companies have not claimed all awarded credits because they have not yet created the expected number of new jobs or paid all years of wages for retained jobs. This under-utilization may reflect that the agreements establish the maximum number of jobs eligible for the credit, biasing jobs expectations upward. Also, some jobs may not be created until late in the agreement period, skewing the claim distribution of awarded claims toward the end of the eligible claim period.

VI. Economic Analysis of the Targeted Jobs Withholding Tax Credit Program

A. Case Study on the Impact of the Targeted Jobs Withholding Tax Credit Program on Competing with Neighboring States

The TJC program was enacted during the mid-2000s to help cities on the Iowa border compete with neighboring states for investment and jobs. The globalization of the supply chain since 2000 has dramatically increased the flexibly of certain businesses, such as manufacturing businesses that have received the majority of awards, to choose locations to make investment. Iowa's border cities, just like every other city in the state, now face competition for business investment against cities from other states across the nation, or even from outside the U.S. Economic development staff from most pilot cities indicated that the program incentives have often been used to compete for investment across the country, thus, the TJC program's application has been similar to other statewide economic incentives rather than a program unique to issues in border cities.

To examine whether the TJC program has achieved its intended goal of helping border pilot project cities compete with neighboring states, the ideal approach is to compare the TJC award offers with competing incentives made by cities across the border. Such an analysis would measure the ability of TJC withholding tax incentives to attract investment into border cities in Iowa and would examine if TJC has increased job growth in pilot project cities relative to competing border cities.

Unfortunately, there are several complications that impede the ability to conduct a statistical analysis to measure the impact of TJC on economic activity in pilot project cities compared to cities in neighboring states. First, pilot project cities' competitors for business investment in certain sectors are not limited to neighboring states. Second, information about competing incentive packages offered by border cities to companies that have applied under the TJC program is not readily available. Third, the number of TJC projects in most pilot project cities is too small to conduct a statistical analysis. Fourth, some pilot project cities do not have a comparable neighboring city across the border.

Thus, a case study approach was adopted, focusing on the healthcare industry in Sioux City. The goal of this case study is to assess whether Sioux City successfully competed with neighboring states for healthcare investment and jobs with the incentives it received via the TJC program. The healthcare industry was chosen because, unlike the manufacturing industry, the competition for healthcare businesses tends to be concentrated within a narrow geographic range. The healthcare industry also experienced significant growth during the last decade in the northwest corner of Iowa.

Sioux City and its surrounding counties in an approximately 50 miles of radius are the focus of this analysis (see Figure 2).[11] Most healthcare service providers located in this

[11] Surrounding counties include Woodbury County in Iowa, Union County and Clay County in South Dakota, and Dakota County, Dixon County, and Thurston County in Nebraska. Although Sioux City extends into Plymouth County, since Plymouth County only accounts for less than one percent of Sioux City's population and its land area, the case study only includes Woodbury County.

region serve patients living in the same region and compete for the same market demand for medical services. It is assumed that medical service providers from these six counties compete for the same regional market. Thus, factors which affect the locations of investment made by those providers include but are not limited to regulatory environments, amenities, health insurance laws, and tax burden. For example, Medicare reimbursement rates vary across states, which could affect a healthcare provider's decision on location. Each state also has different regulatory requirements on certifications and permissions of medical facilities and personnel. These factors are outside of the scope of this case study, rather the focus will be on tax burden.

Among the 44 TJC projects in Sioux City, about $8.0 million were received by healthcare providers, totaling 34.2 percent of awards made by Sioux City. Based on a discussions with representatives from the City of Sioux City, the focus on inducing healthcare providers to participate in the TJC program was mostly a response to intensive competition for healthcare businesses by neighboring states, especially South Dakota. The competition between Iowa and South Dakota was largely concentrated among healthcare providers establishing specialty clinics and hospitals.

Based on the County Business Patterns data released by the Census Bureau, the two counties from South Dakota in this case study (Union County and Clay County) saw the healthcare industry grow rapidly between 2006 and 2015 (see Figure 3). The number of establishment in those two South Dakota counties increased from 72 in 2006 to 91 in 2015, increasing by 26.4 percent over ten years (see Table 10). During the same period, the number of healthcare establishments in the three counties from Nebraska (Dakota County, Dixon County, and Thurston County) dropped from 54 in 2005 to 49 in 2015, declining by 9.3 percent. Iowa's Woodbury County fared better, with the number of healthcare establishments increasing from 337 in 2006 to 345 in 2015 (2.4%).

The fast growth in the number of healthcare establishments locating in Sioux City's South Dakota border counties also drove fast growth in the number of jobs in the healthcare industry. The total number of healthcare jobs in these six counties was 10,832 in 2006, with 78.7 percent of these jobs in Iowa (8,530) and 12.6 percent in South Dakota (1,361) (see Figure 4). The total number of healthcare jobs in these counties increased to 11,470 in 2015. The share of jobs in South Dakota rose to 16.8 percent (1,925). The number of healthcare jobs also increased in Iowa between 2006 and 2015 (8,775), but the share of the jobs in Iowa dropped to 76.5 percent.

Between 2006 and 2015, healthcare providers in the two counties in South Dakota not only had larger job gains than Iowa and Nebraska, but also had higher wage levels (see Figure 5). The average wage in the healthcare industry in the two counties in South Dakota grew from $33,471 in 2006 to $45,168 in 2016. The average wage in the healthcare industry in Woodbury County in Iowa grew from $31,172 in 2006 to $44,413 in 2016. Those counties in Nebraska had the lowest wage levels and the smallest wage growth among all six counties.

While Woodbury County experienced an increase of eight establishments (2.4%) between 2006 and 2015, Clay and Union counties in South Dakota experienced an increase of 19 establishments (26.4%). Similar to those gains, the net gain of healthcare jobs in Clay and Union counties was 564 (41.4%) while the net gain of healthcare jobs in Woodbury County in Iowa was 245 (2.9%) between 2006 and 2015 (see Table 10). Healthcare providers in the TJC program in Sioux City pledged to create 76 jobs and retain 231 jobs between 2005 and 2015, totaling 307 jobs. Without the TJC program, it is assumed that those 76 jobs would have not been created and 231 jobs would not have been retained, the net gain of healthcare jobs would have been a loss of 62 in Woodbury County. The pledged jobs from the TJC program equaled more than 100 percent of the job gain in the healthcare industry logged in Woodbury County. The healthcare job gain in Woodbury County also exceeded the population change in the county (-1.5%). However, even with the help of the TJC program, Iowa still appears to be at a disadvantage when competing with South Dakota for new establishments in the healthcare industry given the faster growth observed.

B. Examine the Incidence of the Targeted Jobs Withholding Tax Credit Program

Another important policy question for a state incentive program is who benefits from the tax incentives. The TJC program allows participating businesses to claim withholding tax credits from the State and make payments to pilot project cities. Pilot project cities usually remit those payments back to participating businesses to use as the local match funding the investment. Thus, in most cases, the program simply results in withholding income tax revenue being diverted from the State to the participating business.

Looking one step further, TJC claims could ultimately benefit several different parties related to the participating businesses. With tax savings from the TJC program, businesses could pay off debts or increase dividends, benefiting the owners of the business, also referred to as owners of capital. Businesses could increase compensation to obtain or retain talented employees, benefiting employees, or labor. If the TJC program increases business activity, additional investment could create more demand for commercial and residential properties in the surrounding area, benefiting land owners or landlords. Finally, participating businesses could use the proceeds from the program to lower prices to increase their market shares, benefiting customers.

Among these potential beneficiaries, benefits flowing toward labor may be of most interest to policymakers. Recent literature provided evidence that employees generally received about 50 percent of the benefits from corporate income tax incentives (David and Grijalva, 2016). If the program results in more, higher paid jobs, the State benefits from higher individual income tax revenue as well as the spillovers from the economic activity generated by additional Iowa workers. To measure the share of TJC program incentives that is benefiting labor, a difference-in-difference model is used. Wages of employees of participating businesses are compared with those of employees from businesses in the same industry in the same pilot project city. If participating businesses' employee wages are significantly higher than wages of employees in other businesses in the same industry in the same city, the higher total wages of participating businesses' employees can be estimated. Then those wages calculated as a ratio of TJC claims is the estimated share of program incentives benefiting labor.

In this study, employee wage data are extracted from withholding tax data reported by businesses in Iowa for each employee in all identified participating businesses (the treatment) and employees in non-participating businesses in matching industries and cities (the control). Each business' industry is determined using Iowa unemployment insurance payment data from Iowa Workforce Development. Other input variables used in the estimation, such as age and school district residence, are pulled from Iowa individual income tax returns. For the estimation, only data from tax year 2007 and 2015 are used, where 2007 is the beginning program year and 2015 is the most recent year when complete data are available. Only employees working for the same company in both 2007 and 2015 are included in this analysis.

In the model, the dependent variable is the wage of each employee. The independent variables include TJC claims made by the participating businesses in that year, employee age, and the square of age. Other independent variables include variables accounting for employer participation in the TJC program, dummy variables accounting for year, industry of the business, city, quality of the employee's school district, and whether the employee chooses to itemize or take the standard deduction on the Iowa income tax returns. Age and the square of age are used to control for the impact of experience and tenure on wages. The dummy variable for city accounts for the unique features of each pilot project city. The dummy variable for industry controls for industry-specific features regarding wage levels and growth. The latter two independent variables are an attempt to proxy for education of the employee, a key explanatory variable for wages that is not available on tax return data. The assumption is that homeowners are much more likely to be more highly educated, controlling for age, and that higher-educated households would choose to live in better performing school districts, measured by average standardized test scores.

If TJC claims made by the participating businesses are estimated to have a significant and positive impact on the wages of an employee, controlling for other independent variables, it provides evidence that the TJC program raised wages of participating businesses' employees.

Only 24 businesses with TJC agreements were matched with the withholding tax data since companies with fewer than 50 employees are not included in the W-2 dataset. Using the propensity score matching method (see Appendix A), there are 1,346 employees from participating businesses and 1,346 employees from non-participating businesses included in the analysis (see Table 11).[12] The average age for the treatment group was 44 and was 40 for the control group in 2007. The average wage for participating businesses' employees was $40,031 in 2007 and $57,796 in 2015. The

[12] The pool of employees in non-participating businesses were chosen through a process called propensity score matching. For each employee working in a participating business identified in 2007, the process chooses the most similar employee working in the same industry and in the same city in a non-participating business.

average wage for non-participating businesses' employees was $38,028 in 2007 and $48,941 in 2015. The number of employees working in Sioux City was 819, the highest among all pilot project cities. Council Bluffs only had 126 employees in the analysis.

The details of the variable selection and the regression are discussed in the Appendix. The regression results showed that the log value of tax credit claims had a significant impact on employee's wage levels. Specifically, for every 100 percent increase of TJC tax incentives, the average wage per employee increased by 1.48 percentage points (see Table 12). The average wage for employees in businesses participating in the TJC program was $57,796 in 2015. The businesses' participation in TJC was estimated to raise the average wage of their employees working in the pilot project city by 1.48 percent, or $856 per employee in 2015. For the 1,346 employees in the analysis, the total wage increase in 2015 that could be contributed to the TJC program is estimated to be $1.15 million.

For these 24 TJC agreements, the total tax credits claimed by the businesses in 2015 were $2.46 million. Thus the share of estimated wage increases to total TJC claims is 46.8 percent, suggesting that 46.8 percent of tax credit benefits received by businesses participating in TJC in 2015 ultimately flowed to employees of these businesses. The remaining 53.2 percent of benefits would be shared among capitol owners, landlords, and customers.

VII. Conclusion

This evaluation study provides an overview and analysis of the Iowa Targeted Jobs Withholding Tax Credit Program. The TJC program provides tax benefits for businesses to create and retain jobs in participating Iowa border cities. Between award years 2007 and 2017, $47.5 million of TJC tax incentives were awarded under 66 agreements that either closed successfully or continue to be monitored by the Iowa Economic Development Authority. TJC claims through the first quarter of 2017 total $27.5 million. Businesses in the manufacturing sector claimed most of TJC tax incentives among all sectors. Businesses participating in the TJC program pledged to create or retain close to 4,200 jobs in Iowa.

The current TJC program is scheduled to expire at the end of fiscal year 2018. Claims under existing agreements will impact General Fund revenues well after the expiration date since the length of TJC contracts can be up to 10 years. This evaluation study contributes to an improved understanding of the TJC program. Through the case study approach, the study found evidence that the TJC program, though an important local economic development tool, still is not enough to help border cities grow at similar rate as the neighboring states.

Based on the analysis, this study also found employees benefit from the TJC program through wage increases with an estimated 46 percent of tax credits claimed in 2015 flowing to the employees, consistent with evidence from previous studies on corporate income tax credits.

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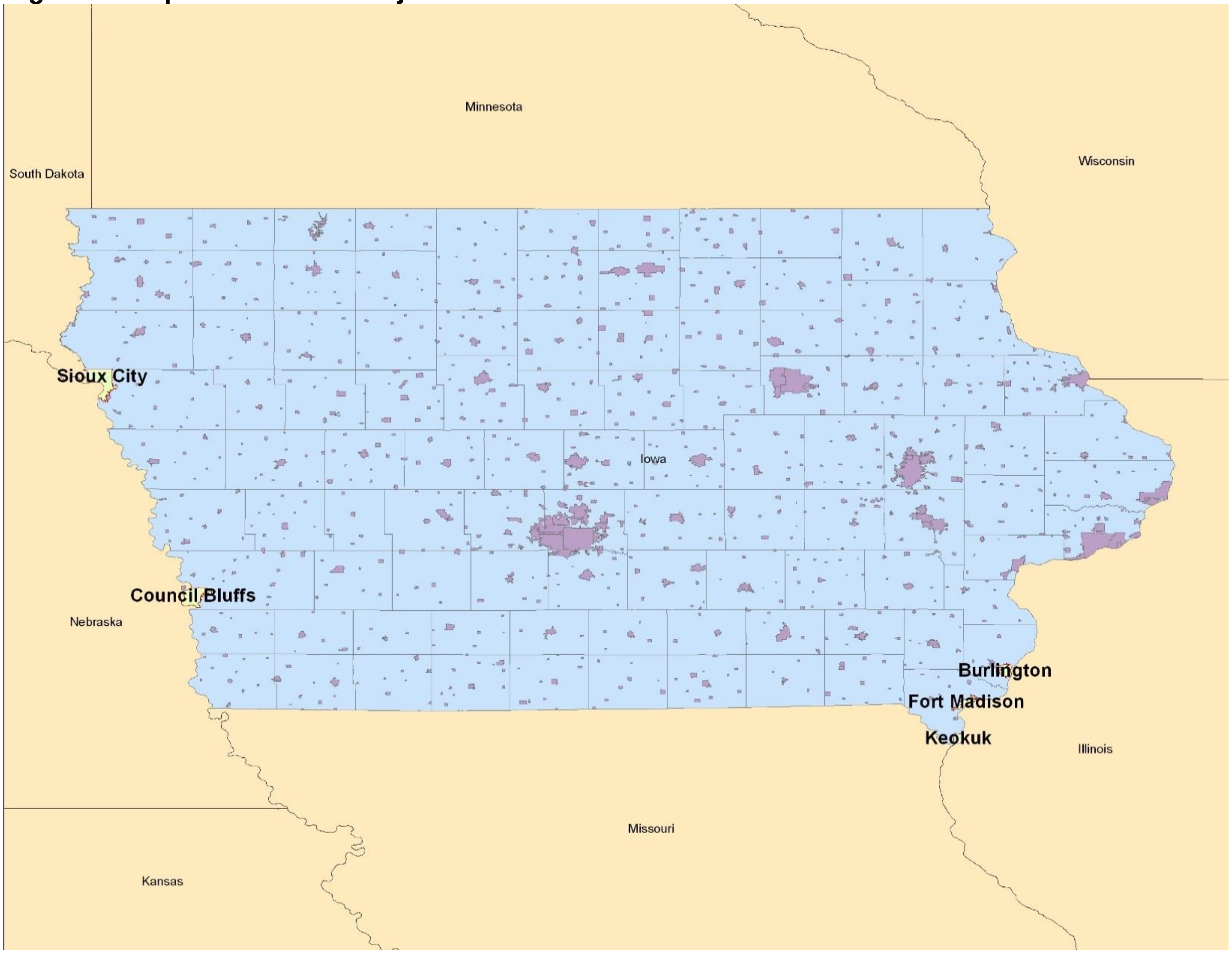
Table and Figures

Figure 1. Map of Five Pilot Project Cities



Source: Iowa Department of Revenue

Table 1. State Payroll Tax Credit Programs for Job Creation

State	Name	Enactment Date	Tax Credit	Location Qualification	Job Qualification	Industry Qualification	Clawback Provision
Alabama	Jobs Act Incentives	2015	Up to 4.5% of payroll of new employees; Benefit period: 10 years	Statewide	At least 25 new jobs	chemical manufacturing, data centers, metal/machining, engineering, design and research projects.	No
Arkansas	Payroll Rebate (Create Rebate)	2003	3.9% of annual payroll in tier 1 counties, 4.25% of annual payroll in tier 2 counties, 4.5% of annual payroll in tier 3 counties, and 5% of annual payroll in tier 4 counties; Benefit period: up to 10 years	Statewide	Total payroll of created job is at least $2,000,000 within 24 months after the contract is signed; For tech companies with a 5% credit, the average wage for new employees must be at least 175% of the lesser of the state or county average wage	Manufacturers; software; motion picture production; distribution centers; office sector businesses; corporate headquarters; commercial, physical and biological research; scientific and technical services	No
Georgia	Quality Jobs Tax Credits (QJTC)	2010	$2,500 for each job if wages are between 110% and 120% of county average wage; $3,000 if wages are between 120% and 150% of county average wage; $4,000 if wages are between 150% and 175% of county average wage; $4,500 if wages are between 175% and 200% of county average wage; $5,000 if if wage is above 200% of county average wage; Benefit years: 7 years	Statewide	At least 50 new jobs with wage at least 10% higher than the county average wage	All eligible	No

Table 1. (Continued) State Payroll Tax Credit Programs for Job Creation

State	Name	Enactment Date	Tax Credit	Location Qualification	Job Qualification	Industry Qualification	Clawback Provision
Illinois	Economic Development for a Growing Economy (EDGE) Credit	2009, expired in 2016, and reenacted in 2017	A negotiable percentage of payroll of new jobs. Benefit period: 10 years	Statewide	Invest at least $5 million and create a minimum of 25 new full-time jobs. For a company with 100 or fewer employees, the company must invest $1 million and create at least 5 new full-time jobs.	No retail trade and personal services	No
Iowa	Targeted Jobs Withholding Tax Credit	2007	3% of the payroll of new jobs. Benefit period: Up to 10 years	5 pilot project cities	Relocating to Iowa; or if already in Iowa, at least 10 new jobs, at least $500,000 investment, or at least retaining 10 jobs	Non-retail and not government entity	Yes
Kansas	Promoting Employment Across Kansas Act	2009	A negotiable percentage of payroll of new jobs. Limit is $6 million for job expansion and up to $2.4 million for job retention. Benefit period: 10 years.	Statewide	Within two years from the date of the agreement, 10 new jobs for businesses relocated in a metro-county, 5 new jobs for relocating to a nonmetro-county, and 100 new jobs for high impact projects. Commencing January 1, 2013 and ending December 31, 2014, retained jobs can also be eligible for the tax credit	Excludes gambling, religious organizations, retail trade, educational services, public administration, utilities, and bioscience	No
Louisiana	Quality Jobs Program	2007	6% cash rebate of 80% of annual gross payroll for new jobs. Beginning on July 1, 2018, 6% of 100% of annual gross payroll for new jobs. Benefit period: 10 years.	Statewide	At least 5 new jobs. Minimum annual payroll thresholds on net new jobs are $250,000 for companies with less than 50 employees and $500,000 for companies with 50 or more employees	Bioscience, manufacturing, environmental technology, food technology, advanced materials, or oil and gas field service	No

Table 1. (Continued) State Payroll Tax Credit Programs for Job Creation

State	Name	Enactment Date	Tax Credit	Location Qualification	Job Qualification	Industry Qualification	Clawback Provision
Missouri	Missouri Works	2013	For enhanced enterprise zones, rural zones, and statewide works, 100% of the withholding tax of the new jobs. For large projects, 6% or 7% of the payroll of the new jobs, depending on the wage levels. Annual limit is $106 million for 2016 forward. Benefit period: 5 or 6 years	Statewide	For enhanced enterprise zones, at least 2 new jobs with at least 80% of county average wage and $100,000 of new investment. For rural zones, at least 2 new jobs with at least 90% of county average wage and $100,000 of new investment. For statewide works, at least 10 new jobs with at least 90% of county average wage. For large projects awarded with 6% of new payroll, at least 100 new jobs with at least 120% of county average wage. For large projects awarded with 7% of new payroll, at least 100 new jobs with at least 140% of county average wage	Excludes gambling, retail trade, food and drinking places, public utilities, educational services, religious organizations, and public administration companies	No

Table 1. (Continued) State Payroll Tax Credit Programs for Job Creation

State	Name	Enactment Date	Tax Credit	Location Qualification	Job Qualification	Industry Qualification	Clawback Provision
Nebraska	Nebraska Advantage Act	2006	For a tier 1, 2, 3, or 4 project: 3% of payroll of new employees if the average wage is at least 60% of the Nebraska average wage; 4% if it is at least 75% of the Nebraska average wage; 5% if it is at least 100% of the Nebraska average wage; 6% if it is at least 125% of the Nebraska average wage; effective 1/1/2009, exclude any employee with wage over of $1 million. For tier 2 or 4, the credit is 10% of the investment. For tier 1, 3% of the investment. For tier 6, 15% of the investment. For a tier 1, 3, or 6 project, benefit period: 10 years; For a tier 2, 4, or 5 project, benefit period: 7 years	Statewide	Tier 1, investment of at least one million dollars and the hiring of at least ten new employees; Tier 2, investment of at least three million dollars and the hiring of at least thirty new employees; Tier 3, the hiring of at least thirty new employees; Tier 4, investment of at least ten million dollars and the hiring of at least one hundred new employees; Tier 5, investment of at least thirty million dollars; and Tier 6 investment in qualified property of at least ten million dollars and the hiring of at least seventy-five new employees, or investment of at least one hundred million dollars and the hiring of at least fifty new employees.	For a tier 1 project: research; the assembly, fabrication, manufacture, or processing of tangible personal property; sale of software development services, computer systems design, product testing services, or guidance or surveillance; For a tier 2, tier 3, tier 4, or tier 5 project: data processing, telecommunication, insurance, or financial services; headquarter facilities; and storage, warehousing, distribution, transportation, or sale of tangible personal property. For a tier 6 project: any non-retail business	Yes

Table 1. (Continued) State Payroll Tax Credit Programs for Job Creation

State	Name	Enactment Date	Tax Credit	Location Qualification	Job Qualification	Industry Qualification	Clawback Provision
New Jersey	Municipal Rehabilitation and Economic Recovery Act	2002	$2,500 in the first year and $1,250 in the second year for each qualifying job. Benefit period: 2 year.	Camden	No	All eligible	No
New Mexico	High-Wage Jobs Tax Credit	2004	10% of wages and benefits for new employees in high-wage jobs against withholding tax. Limit: $12,000 per eligible employee. Benefit period: 4 years	Statewide	New jobs must be paid at least $40,000 annually in a municipality of 40,000 or more residents, and at least $28,000 elsewhere in the state	All eligible	No
New York	Excelsior Jobs Program	2011	6.85% of gross wages paid for each net new job. Benefit period: 10 years.	Statewide	At least 5 net new jobs	Scientific Research and Development, Software Development, Agriculture, Manufacturing, Financial Services, Back Office, Distribution, Music Production, Entertainment Companies, and other firms creating at least 300 net new jobs and investing at least $6 million	Yes
North Dakota	New Industry Wage and Salary Credit	1969	1% of payroll in the first three years of business and 0.5% in the fourth and fifth years. Benefit period: 5 years.	Statewide	Relocating to North Dakota	Assembling, fabricating, manufacturing, and mixing or processing any agricultural, mineral, or manufactured products	No

Table 1. (Continued) State Payroll Tax Credit Programs for Job Creation

State	Name	Enactment Date	Tax Credit	Location Qualification	Job Qualification	Industry Qualification	Clawback Provision
Ohio	Job Creation Tax Credit Program Servicing	2004	A negotiable percentage of state tax withholdings on the wages of new employees. Benefit period: 15 years.	Statewide	At least 10 new full-time positions paying at least 150% of minimum wage	All eligible	No
Oklahoma	Quality Jobs Program/ Small Employer Quality Jobs	1993	A negotiable percentage of payroll up to a 6% of payroll of new jobs. Benefit period: 10 years.	Statewide	A $2.5 million taxable payroll for any four consecutive quarters during the first 12 quarters in the program and have an average wage equal to or above the average county wage in which the company is locating or expanding	Manufacturing, research, central administrative offices, warehousing or distribution if 40% of the product is shipped out of state, certain enumerated service industries, oil and gas company headquarters	No
	21st Century Quality Jobs Incentive Act	2009	A negotiable percentage of payroll up to a 10% of payroll of new jobs. Benefit period: 10 years.	Statewide	Requires at least 10 full-time jobs at an annual average wage of the lesser of $95,243 or 300% of the county's average wage	Specialty hospitals (except psychiatric and substance abuse hospitals), performing arts companies, electric utility activities, engineering construction, motion picture and video industries, sound recording industries, financial investment activities, insurance carriers, professional services, and electronic equipment repair and maintenance activities	No

Table 1. (Continued) State Payroll Tax Credit Programs for Job Creation

State	Name	Enactment Date	Tax Credit	Location Qualification	Job Qualification	Industry Qualification	Clawback Provision
South Carolina	Job Development Credit	2001	100% of South Carolina income tax withholding on new employees. Benefit period: 10 years. Limit: $3,250 per employee	Statewide	At least 10 new jobs	Manufacturing, certain tourism functions, processing, warehousing, distribution, research and development, corporate office facilities, certain medical, surgical, and other health services, certain qualifying service-related industries, certain technology intensive facilities (effective for tax years beginning on or after June 30, 2001), and renewable energy manufacturing facilities	No
Utah	Targeted Business Income Tax	2017	A negotiable percentage of state tax withholdings on the wages of new employees. The limit for the total awards each year: $300,000	Be located in an enterprise zone and a county with a population of less than 25,000 and an unemployment rate higher than the state average	Create new jobs	Not be engaged in construction, retail trade or public utility activities	No

Source: Department of Revenue Web Sites of Various States

Table 2. Targeted Jobs Withholding Tax Credit Awards by Fiscal Year, 2007-2017

Fiscal Year	Number of Initial Awards	Total Initial Awards	Number of Final Awards	Total Final Awards	Average Final Awards
2007	2	$845,700	2	$845,700	$422,850
2008	15	$5,714,588	15	$5,714,588	$380,973
2009	9	$8,014,000	9	$8,014,000	$890,444
2010	2	$2,638,177	2	$2,638,177	$1,319,089
2011	8	$15,718,014	8	$15,718,014	$1,964,752
2012	9	$6,113,937	8	$5,462,622	$682,828
2013	8	$9,685,051	4	$3,787,529	$946,882
2014	0	$0	0	$0	$0
2015	10	$2,214,081	10	$2,214,081	$221,408
2016	5	$1,205,900	5	$1,205,900	$241,180
2017	4	$1,990,043	3	$1,944,293	$648,098
Total	72	$54,139,491	66	$47,544,904	$720,377

Source: The Iowa Economic Development Authority
Note: Some businesses did not participate in the program after they signed the initial agreements; those agreements are not included in the right two columns.

Table 3. Jobs and Investment Pledged by Businesses Participating in Targeted Jobs Program by Fiscal Year, 2007-2017

Fiscal Year	Total Award Amount	Capital Investment Pledged	Created Jobs Pledged	Retained Jobs Pledged	Total Jobs Pledged	Average Awarded Credits Per Job
2007	$845,700	$1,240,000	11	38	49	$17,259
2008	$5,714,588	$358,533,843	515	283	798	$7,161
2009	$8,014,000	$48,803,000	350	449	799	$10,030
2010	$2,638,177	$10,426,000	3	185	188	$14,033
2011	$15,718,014	$70,198,000	93	922	1,015	$15,486
2012	$5,462,622	$21,755,461	58	249	307	$17,794
2013	$3,787,529	$57,260,276	221	364	585	$6,474
2015	$2,214,081	$52,861,125	80	64	144	$15,376
2016	$1,205,900	$11,650,000	94	48	142	$8,492
2017	$1,944,293	$123,159,000	120	34	154	$12,625
Total	$47,544,904	$755,886,705	1,545	2,636	4,181	$11,372

Source: The Iowa Economic Development Authority
Note: Some businesses did not participate in the program after they signed the initial agreements; those agreements are not included in this table.

Table 4. Targeted Jobs Withholding Tax Credit Awards by Pilot Project City, 2007-2017

Pilot City	Number of Initial Awards	Total Initial Awards	Number of Final Awards	Total Final Awards	Distribution of Awards
Sioux City	50	$25,804,276	44	$19,209,689	40.4%
Fort Madison	5	$9,452,928	5	$9,452,928	19.9%
Council Bluffs	5	$2,410,221	5	$2,410,221	5.1%
Burlington	7	$8,969,260	7	$8,969,260	18.9%
Keokuk	5	$7,502,806	5	$7,502,806	15.8%
Total	72	$54,139,491	66	$47,544,904	100.0%

Source: The Iowa Economic Development Authority
Note: Some businesses did not participate in the program after they signed the initial agreements; those agreements are not included in the right three columns.

Table 5. Jobs and Investment Pledged by Businesses Participating in Targeted Jobs Program by Pilot Project City, 2007-2017

Pilot City	Total Award Amount	Capital Investment Pledged	Created Jobs Pledged	Retained Jobs Pledged	Total Pledged Jobs	Average Awarded Credits Per Job
Sioux City	$19,209,689	$114,216,469	525	1,027	1,552	$12,377
Fort Madison	$9,452,928	$93,933,375	656	457	1,113	$8,493
Council Bluffs	$2,410,221	$300,580,000	88	56	144	$16,738
Burlington	$8,969,260	$201,148,261	183	538	721	$12,440
Keokuk	$7,502,806	$46,008,600	93	558	651	$11,525
Total	$47,544,904	$755,886,705	1,545	2,636	4,181	$11,372

Source: The Iowa Economic Development Authority
Note: Some businesses did not participate in the program after they signed the initial agreements; those agreements are not included in this table.

Table 6. Targeted Jobs Withholding Tax Credit Awards by Industry, 2007-2017

Industry	Number of Awards	Total Award Amount	Average Award Amount	Distribution of Award Amount
Manufacturing	20	$27,230,103	$1,361,505	57.3%
Healthcare	19	$8,763,648	$461,245	18.4%
Wholesale	10	$4,388,639	$438,864	9.2%
Construction	3	$1,995,000	$665,000	4.2%
Other Service	1	$1,039,221	$1,039,221	2.2%
Finance	2	$1,022,914	$511,457	2.2%
Professional Service	4	$979,629	$244,907	2.1%
Information	1	$936,000	$936,000	2.0%
Transportation	4	$762,750	$190,688	1.6%
Administrative Service	1	$225,000	$225,000	0.5%
Retail	1	$202,000	$202,000	0.4%
Total	66	$47,544,904		100.0%

Source: The Iowa Economic Development Authority
Note: Some businesses did not participate in the program after they signed the initial agreements; those agreements are not included in the right two columns.

Table 7. Targeted Jobs Withholding Tax Credit Claims by Calendar Year

Calendar Year	Number of Claims	Total Claims	Average Claim
2007	14	$171,372	$12,241
2008	42	$555,176	$13,218
2009	78	$1,248,927	$16,012
2010	86	$1,562,666	$18,171
2011	92	$2,379,900	$25,868
2012	129	$3,258,896	$25,263
2013	159	$3,663,040	$23,038
2014	169	$4,039,123	$23,900
2015	180	$4,412,769	$24,515
2016	190	$5,006,195	$26,348
2017	37	$1,179,338	$31,874
Total	1,176	$27,477,401	$23,365

Source: The Iowa Department of Revenue
Note: Tax year totals includes all claims reported on the four withholding quarterly returns filed for each calendar year. Claim data from tax year 2017 are still incomplete.

Table 8. Targeted Jobs Withholding Tax Credit Claims by Award Year, 2007-2016

Award Year	Total Claims	Total Award	Ratio of Claim to Award
2007	$1,013,874	$845,700	119.9%
2008	$3,963,408	$5,714,588	69.4%
2009	$7,607,086	$8,014,000	94.9%
2010	$1,882,964	$2,638,177	71.4%
2011	$7,502,748	$15,718,014	47.7%
2012	$1,788,060	$5,462,622	32.7%
2013	$2,827,704	$3,787,529	74.7%
2015	$671,444	$2,214,081	30.3%
2016	$220,113	$1,205,900	18.3%
Total	$27,477,401	$45,600,611	60.3%

Source: The Iowa Department of Revenue
Note: One reason total claims associated with FY 2007 awards exceed the total award amount is that the award amount was only an estimated tax credit amount based on their pledged job creation and wages. No claims have been made on agreements signed in 2017.

Table 9. Targeted Jobs Withholding Tax Credit Claims by Pilot Project City, 2007-2017

Pilot City	Number of Claims	Total Claims	Average Claims Per Year	Distribution of Claims	Shares of Claims to Awards
Sioux City	852	$11,853,736	$1,077,612	43.1%	61.9%
Fort Madison	121	$5,996,476	$545,134	21.8%	63.4%
Council Bluffs	51	$730,875	$66,443	2.7%	30.3%
Burlington	88	$5,952,604	$541,146	21.7%	82.1%
Keokuk	64	$2,943,710	$267,610	10.7%	39.2%
Total	1,176	$27,477,401	$2,497,946	100.0%	60.0%

Source: The Iowa Department of Revenue
Note: Tax year totals includes all claims reported on the four withholding quarterly returns filed for each calendar year. Claim data from tax year 2017 are still incomplete.

Figure 2. Map of Six Counties in Iowa, South Dakota, and Nebraska Surrounding Sioux City

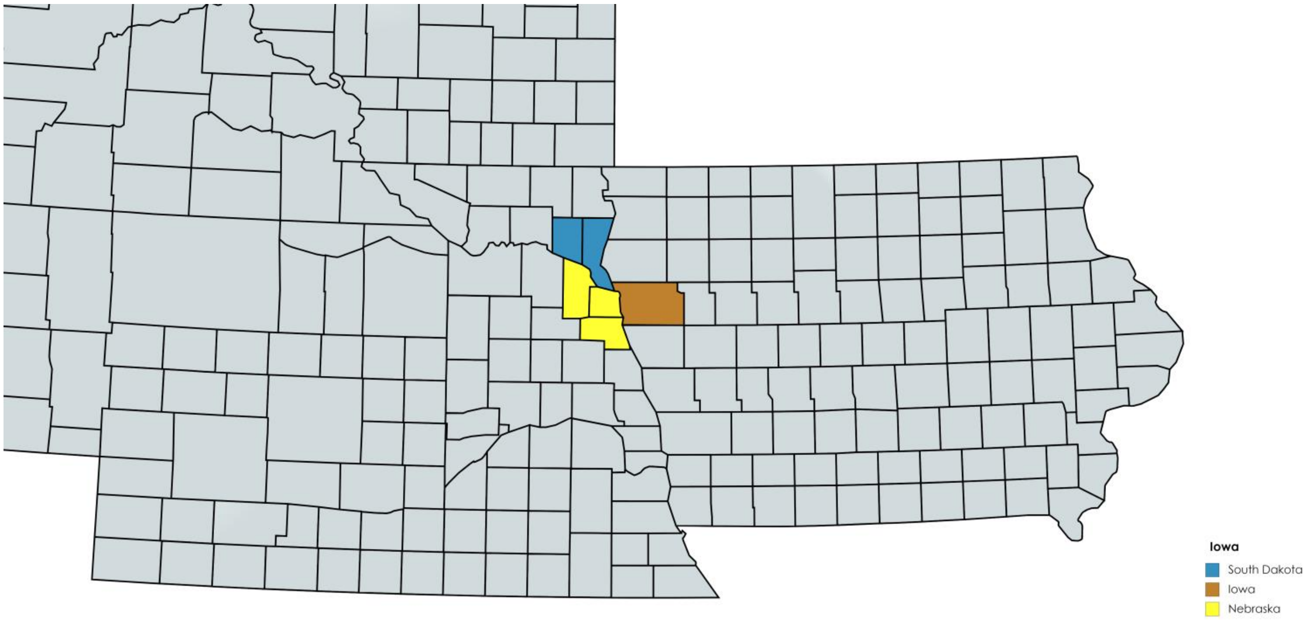
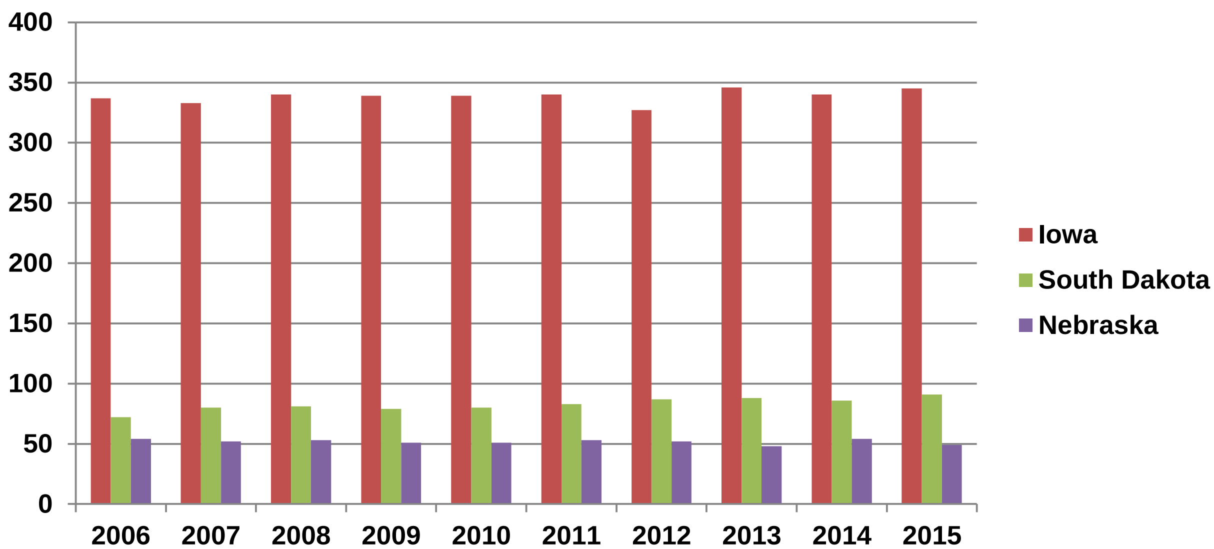


Figure 3. Number of Healthcare Establishments in Six Case Study Counties from Three States, 2006-2015



Source: County Business Patterns, Census Bureau

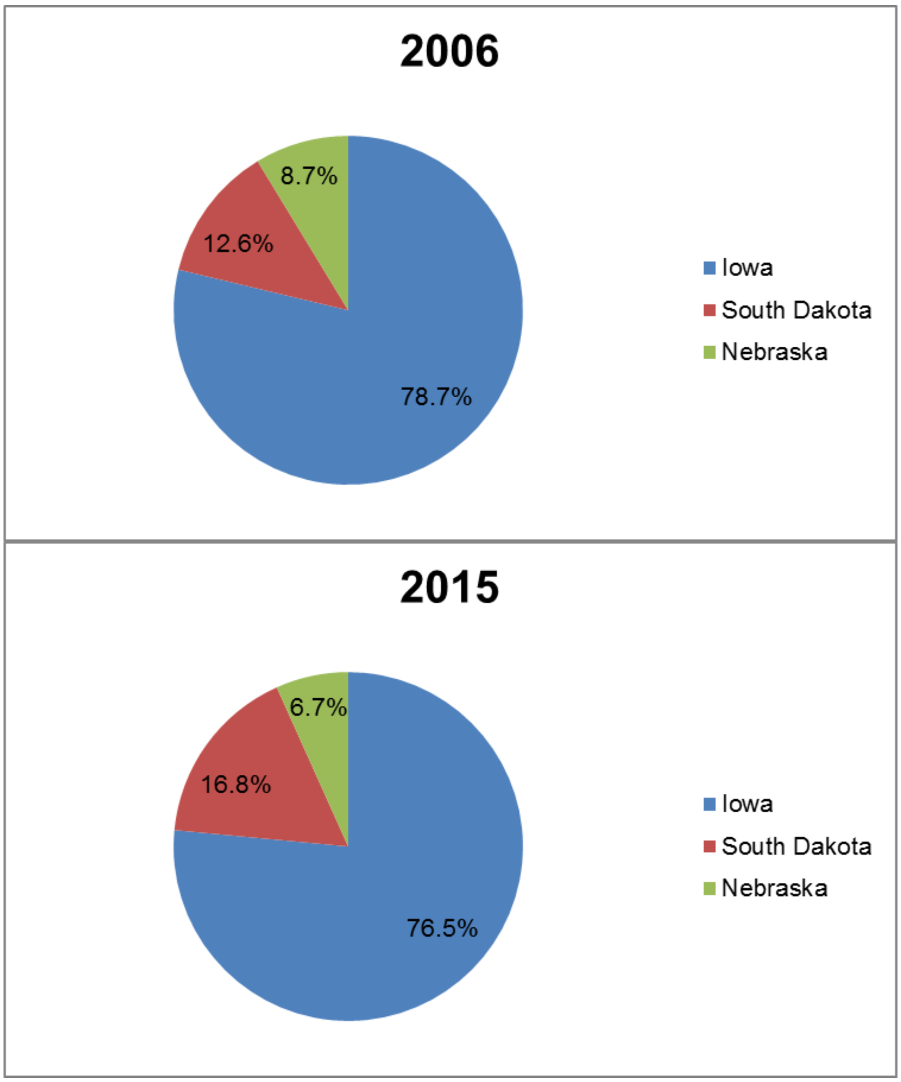
Table 10. Comparison between Iowa's Woodbury County and South Dakota's Clay County and Union County

	Iowa	South Dakota
Increase in Number of Establishments	8	19
Growth Rate of Establishments	2.4%	26.4%
Increase in Number of Jobs	245	564
Growth Rate of Jobs	2.9%	41.4%
Average Wage Level in 2006	$31,172	$33,472
Growth Rate of Wage	42.5%	34.9%
Population Growth	-1.5%	11.2%

Note: Number of Establishments, employment, and wage data are between 2006 and 2015. Population data are between 2000 and 2014

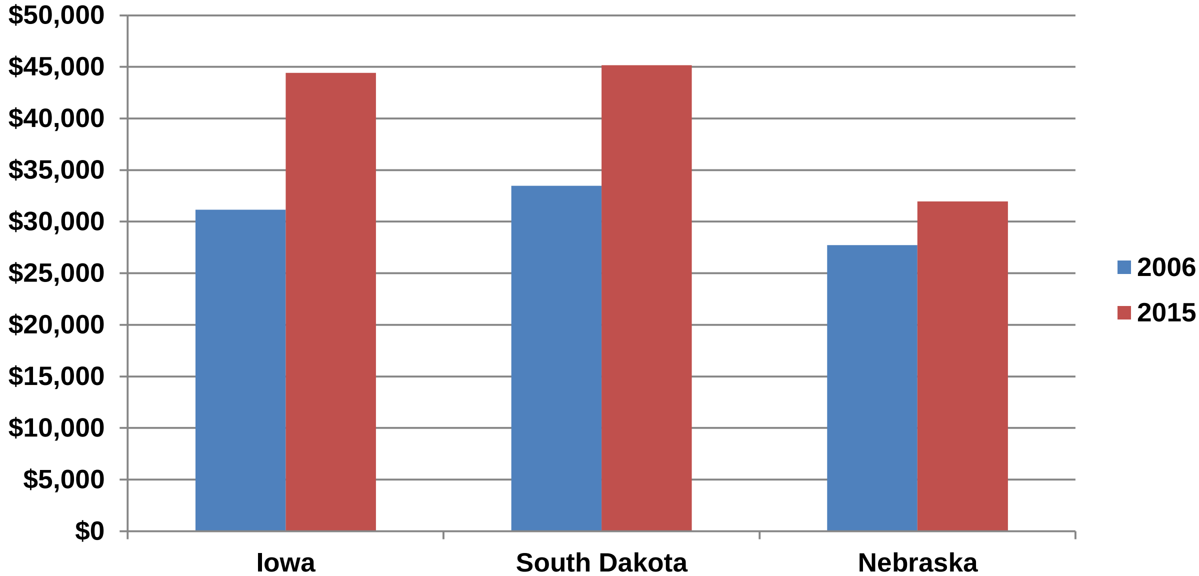
Source: County Business Patterns, Census Bureau

Figure 4. Share of Healthcare Jobs Among Six Case Study Counties in Three States, 2006 and 2015



Source: County Business Patterns, Census Bureau

Figure 5. Average Wage of Healthcare Jobs Among Six Case Study Counties in Three States, 2006 and 2015



Source: County Business Patterns, Census Bureau

Table 11. Employees in TJC Participating Businesses and Non-Participating Businesses in the Sample, 2007 and 2015

	Year	Number of Employees	Average Wage	Standard Deviation of Wage	Median Wage	Average Age
Participating Business	2007	1,346	$40,031	$42,772	$37,854	44
	2015	1,346	$57,796	$86,686	$48,158	52
Non-Participating Business	2007	1,346	$38,028	$30,788	$35,439	40
	2015	1,346	$48,941	$42,377	$45,758	48
Sioux City	2007	819	$39,956			43
	2015	819	$49,138			51
Fort Madison	2007	743	$41,209			41
	2015	743	$54,979			49
Council Bluffs	2007	126	$48,972			41
	2015	126	$57,484			49
Burlington	2007	408	$46,670			41
	2015	408	$63,339			49
Keokuk	2007	664	$36,408			40
	2015	664	$44,299			48

Source: Iowa Individual Income Tax Returns, Iowa Department of Revenue

Table 12. Regression Results of TJC Claim's Impact on Employee Wages, 2007 and 2015

Independent Variables	Estimated Coefficicents	Standard Error
TJC Claim by Business	0.0148***	0.0026
Age	0.0809***	0.0066
Square Value of Age	-0.0009***	0.0001
Dummy Variable for Itemization Deduction	0.0929***	0.0183
Dummy Variable for Participation	0.0773***	0.0232
Dummy Variable for Year 2015	0.2006***	0.0207
Dummy Variable for Manufacturing	0.1526***	0.0323
Dummy Variable for Healthcare	-0.0872***	0.0328
Dummy Variable for Sioux City	-0.0401	0.0353
Dummy Variable for Council Bluffs	0.0215	0.0517
Dummy Variable for Burlington	0.0616**	0.0284
Dummy Variable for Keokuk	-0.2662***	0.0239
Dummy Variable for Better School District	0.0243	0.0259
Ratio of New Jobs to All Jobs	-0.2622***	0.0312

** The estimated coefficient is significant at the 5% level
*** The estimated coefficient is significant at the 1% level

Appendix

Businesses need to create or retain jobs and make new investment to be eligible for the TJC program. Thus, businesses participating in the TJC program are more likely to be profitable or grow faster than non-participating businesses in the same region and in the same industry due to existing differences in management and operation. The goal of this analysis is to estimate the share of the tax incentives received by companies participating in the TCJ program that is passed to employees through higher wages. Thus, employees in the participating businesses formed the treatment group. Employees from non-participating businesses, who worked in the same cities and in the same industries, formed the control group.

To construct a control group with employees from the non-participating businesses, the propensity score matching method is used to select observations. Using a logistic regression model, the dependent variable in the propensity score matching is a dummy variable representing whether an employee works for a business participating in the TJC program. The independent variables in the propensity score matching include employee age, and the square of age. Other independent variables include dummy variables accounting for industry of business, city, quality of the employee's school district, and whether the employee chooses to itemize or take the standard deduction on their Iowa income tax returns. These are the same variables used in the estimation model discussed in the text, with the same logic for what each represents.

The coefficients of the logistical regression were estimated using employees working for participating businesses. The estimated coefficients were used to predict the probability other employees would work at a participating business. The probabilities for employees at participating businesses were matched with the closest predicted probabilities of employees from the non-participating businesses. Because the number of employees in the control group is smaller than that in the treatment group, some employees whose predicted probabilities were close to those probabilities of multiple employees in the treatment group were used in multiple matches, which means that there are duplicate observations in the control group.

There are 1,346 observations in both the treatment group and the control group after the propensity score matching (see Table 11). To measure the impact of the TJC tax credit claim on wages of employees in the participating businesses, a difference-in-difference model is used to separate that impact from the existing differences between participating businesses and non-participating businesses.

In the estimation model, a dummy variable for whether the employee is employed by a participating business controls for the difference between participating businesses and non-participating businesses. The variable *age* is expected to be positively correlated with employee's wages age is a proxy for experience and seniority of an employee. The square of age measures the speed of the wage growth due to more experience. It is expected when employees become more experienced, the growth rates of their wages would likely be lower.

Dummy variables were used to control for manufacturing and healthcare industries. Dummy variables were used to control for differences between pilot project cities, with Fort Madison excluded as the default city. A dummy variable indicating the employee itemized deduction on their Iowa return filed for the year of interest is included as a measurement of marriage and homeownership. To be eligible for the TJC program, businesses could create new jobs and retain existing jobs. The ratio of pledged new jobs to all pledged jobs is used to measure the characteristics of the TJC project which the employee's employer signed.

The dummy variable for school district is an attempt to proxy for education of the employee, a key explanatory variable for wages that is not available on tax return data. The assumption is that homeowners are much more likely to be more highly educated, controlling for age, and that higher-educated households would choose higher-quality school districts, measured by average standardized test scores. The dummy variable is set to one when the school district from the individual income tax returns is among the top quantile of the all Iowa school districts in ACT test scores.

Using the difference-in-differences model, the estimated coefficient of the TJC claims is statistically significant and positively correlated with the employees' wages, suggesting the tax credit claims contributed to wage growth (see Table 12). The coefficient of age is also positive and statistically significant. As expected, employees' wages grow when they become more experienced, but the wage growth rates decrease since the coefficient of the age square is negative and statistically significant.

The coefficient for itemized deductions is positive and statistically significant, implying that homeowners are likely to have higher wages. Employees in the manufacturing sector are likely to have higher wages than other industries. Employees in the healthcare industries are likely to have lower wages than other industries. Wages of employees from Sioux City and Council Bluffs do not differ significantly from those from Fort Madison. Employees from Burlington are likely to have higher wages than Fort Madison, and employees from Keokuk are likely to have lower wages.

The coefficient of the dummy variable of school district is positive, but statically insignificant suggesting it is not a strong proxy for education. The coefficient of the ratio of new jobs to all pledged jobs is negative and statically significant. This suggests that a TJC project with a higher share of pledged new jobs would be likely to reduce wages of employees, compared to the project with more retained jobs. The reason for this negative coefficient could be that retained employees might be more senior than new employees. Thus, for projects with more retained employees, wages of employees are likely to be higher.