

Department of

IOWA  **REVENUE**

Research Activities Tax Credit

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Tax Expenditure Committee
November 16, 2011

Outline

- Review federal and Iowa research credit
- Summarize research credits in other states
- Look at NSF data on R&D in Iowa
- Examine RAC claims data
- Discuss IDR Survey on Research Activities
- Present hypothetical firm analysis
- Final thoughts

Federal R&E Credit

- Introduced in 1981
 - Temporary – renewed 14 times through 2011
 - Nonrefundable
 - Automatic
- 20% credit for incremental qualified research
 - Eligible expenditures above a specified “base”
 - Simplified credit is 14% of QRE above 50% in last 3 yrs
 - Research must be:
 - Experimental
 - Technological
 - Have goal of developing new product or process
- \$8.3 billion in claims, TY 2008

Iowa Research Activities Tax Credit

- Introduced in 1985
 - Permanent (1991)
 - Refundable
 - Automatic
- 6.5% of incremental qualified research in Iowa
 - Based on federal definitions
 - Alternative incremental research credit, 2000-2009
 - Alternative simplified credit 4.55%, 2010
- Supplemental credit can be awarded by EDA
- \$48.6 million in claims, TY 2009

Policy Goals

- Encourage research activities in the state and the economic activity that follows
- Provide support to businesses engaging in research even if they have no State tax liability

Research Credits Across the US

- In 2011, 36 states offer research credit
- 20 states rely on federal credit rules
- Rates range from 1.25% to 25%
- Most common rate 10%
- Only 6 states offer refundable credit
 - Iowa, Louisiana, Minnesota, Nebraska, New York, and Virginia
- Three neighbors offer credits
 - Minnesota, Nebraska, and Wisconsin

Amount of Research in Iowa

Year	Total R&D (Millions)	R&D per Capita	State Rank: R&D per Capita	R&D as Share of State GDP	State Rank: R&D as Share of GDP
1987	\$540.2	\$195	31	1.20%	31
1993	\$902.1	\$318	31	1.44%	30
1997	\$979.7	\$339	31	1.20%	32
2003	\$1,451.0	\$493	35	1.39%	35
2007	\$1,882.0	\$630	32	1.40%	35

Source: National Science Foundation/Division of Science Resources Statistics;
U.S. Census Bureau; Bureau of Economic Analysis, U.S. Department of Commerce

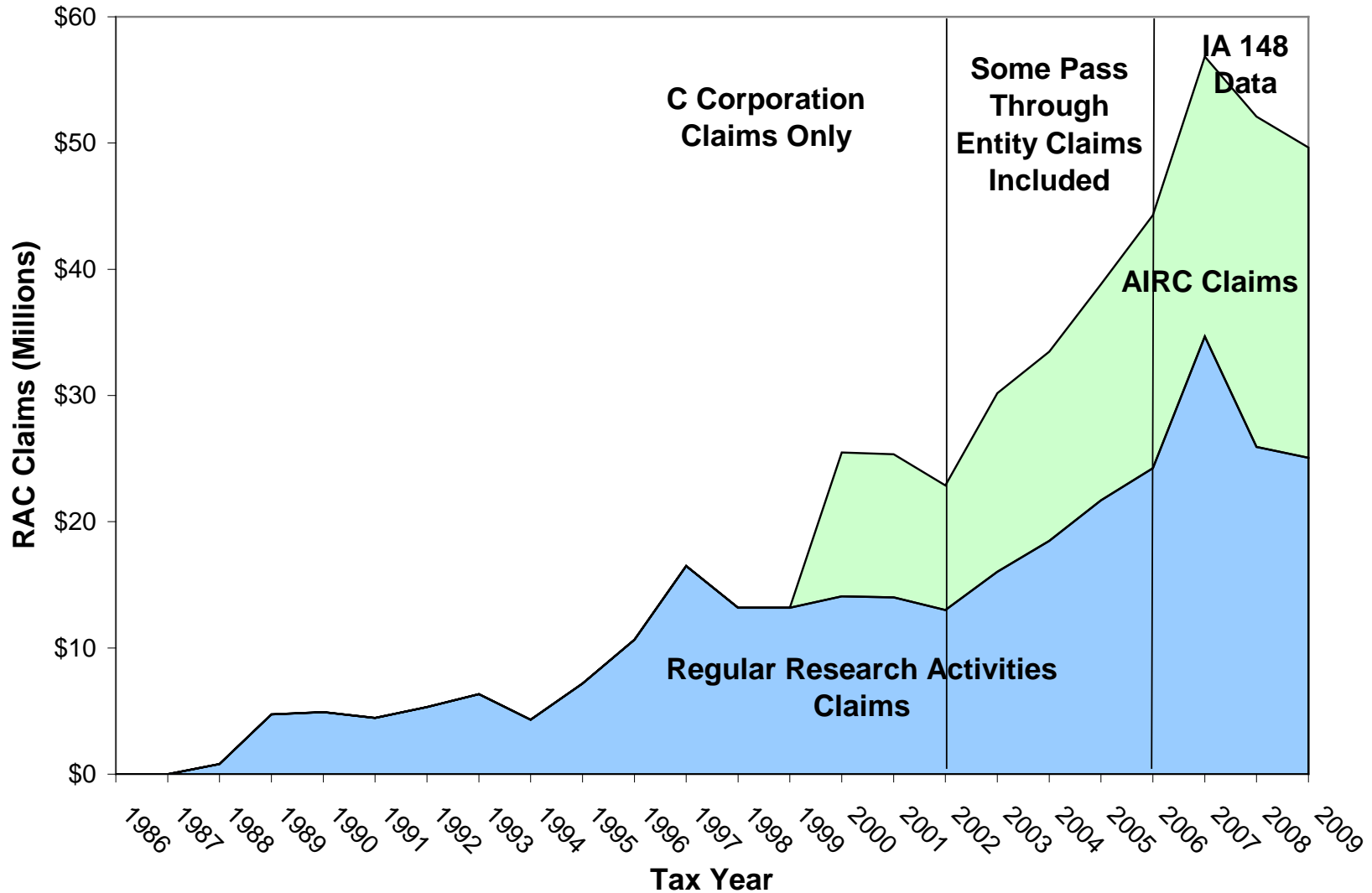
Research by Source, 2007

State	Business		Academia	Federal	FFRDC	Other Non-		Total	
	Millions	Rank				Millions	Millions	Profit	State
Illinois	\$11,362	7	\$1,867	\$125	\$827	\$88	\$18	\$14,287	8
Iowa	\$1,202	31	\$587	\$51	\$25	\$16	*	\$1,882	31
Minnesota	\$6,636	13	\$637	\$57	\$0	\$200	\$3	\$7,533	15
Missouri	\$2,736	23	\$941	\$48	\$0	\$19	\$10	\$3,754	25
Nebraska	\$489	37	\$365	\$41	\$0	\$5	*	\$900	39
South Dakota	\$132	48	\$82	\$18	\$0	\$5	\$3	\$240	50
Wisconsin	\$3,411	21	\$1,067	\$48	\$0	\$24	\$5	\$4,555	21
U.S. Total	\$265,919		\$49,421	\$24,591	\$13,809	\$5,693	\$308	\$359,741	
State	Business	Academia	Federal	FFRDC	Other Non-	Profit	State		
	Share	Share	Share	Share	Share	Share	Share		
Illinois	79.5%	13.1%	0.9%	5.8%	0.6%	0.1%			
Iowa	63.9%	31.2%	2.7%	1.3%	0.9%	*			
Minnesota	88.1%	8.5%	0.8%	0.0%	2.7%	0.0%			
Missouri	72.9%	25.1%	1.3%	0.0%	0.5%	0.3%			
Nebraska	54.3%	40.6%	4.6%	0.0%	0.6%	*			
South Dakota	55.0%	34.2%	7.5%	0.0%	2.1%	1.3%			
Wisconsin	74.9%	23.4%	1.1%	0.0%	0.5%	0.1%			
U.S. Total	73.9%	13.7%	6.8%	3.8%	1.6%	0.1%			

Source: National Science Foundation. Note: FFRDC stands for Federally Funded Research and Development Centers.

*=Represents an amount less than \$0.5 million

Historical RAC Claims



RAC Claims by Tax Type

Tax Year	Credits Claimed by C Corporations			Credits Claimed by Individuals		
	RAC Count	Average RAC Claim	Total RAC Claims (Millions)	RAC Count	Average RAC Claim	Total RAC Claims (Millions)
2002	152	\$184,893	\$28.1	266	\$6,161	\$1.6
2003	172	\$178,694	\$30.7	416	\$7,492	\$3.1
2004	170	\$195,774	\$33.3	385	\$4,807	\$1.9
2005	182	\$216,673	\$39.4	454	\$5,928	\$2.7
2006	204	\$198,833	\$40.6	728	\$4,513	\$3.3
2007	211	\$249,911	\$52.7	1,065	\$3,150	\$3.4
2008	206	\$234,614	\$48.3	920	\$3,587	\$3.3
2009	180	\$251,727	\$45.3	682	\$4,809	\$3.3

- Individual claims mostly pass-through from S corporations or limited liability companies

RAC Refunds

	RAC Claims Paid as Refunds	Refunds as Share of Total RAC Claims	Share of RAC Filers Receiving Some Refund
Corporate Claims			
Tax Year			
2006	\$37.9	93.4%	70.6%
2007	\$49.8	94.5%	78.4%
2008	\$44.9	92.8%	70.6%
2009	\$42.2	93.1%	61.8%
Individual Claims			
Tax Year			
2006	\$0.8	23.1%	26.8%
2007	\$0.9	27.7%	25.4%
2008	\$0.9	28.7%	27.7%
2009	\$0.8	25.2%	28.3%

Timing of RAC Claims

Corporate Income Tax Credit Claims

Share of Total RAC Tax Year Corporate Claims by Fiscal Year that Return was Received

Tax Year	2008	2009	2010	2011	2012
2008	0.0%	0.8%	29.8%	69.4%	0.0%
2009	0.0%	0.0%	0.8%	64.7%	34.6%

Timing of Corporate Claims by Fiscal Year that Return was Received

Fiscal Year =	Tax Year	Tax Year + 1	Tax Year + 2	Tax Year + 3	Tax Year + 4
	0.0%	1.1%	43.9%	54.9%	0.0%

Individual Income Tax Credit Claims

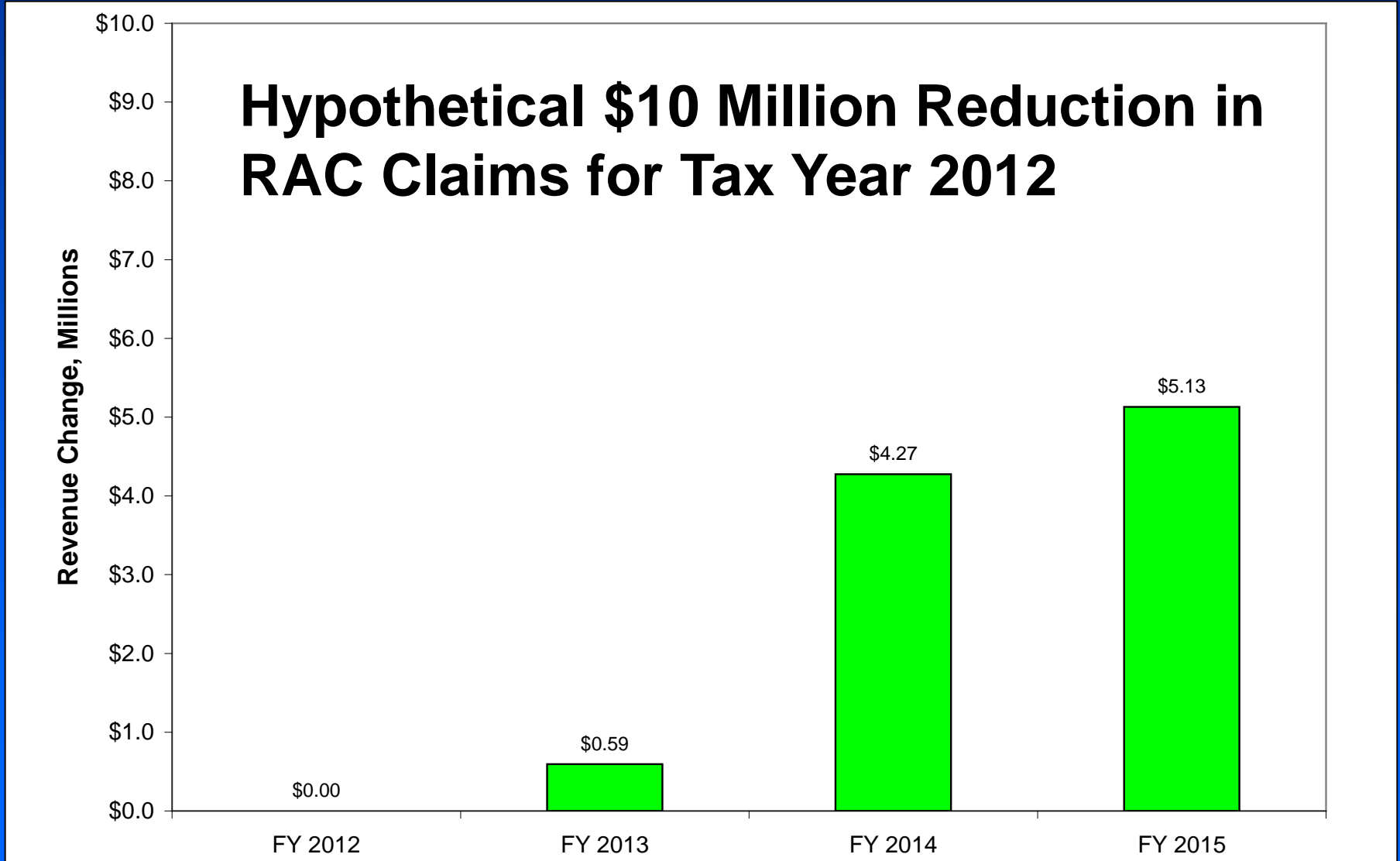
Share of Total RAC Tax Year Individual Claims by Fiscal Year that Return was Received

Tax Year	2008	2009	2010	2011	2012
2008	0.0%	75.7%	24.3%	0.1%	0.0%
2009	0.0%	0.0%	75.7%	24.3%	0.0%

Timing of Individual Claims by Fiscal Year that Return was Received

Fiscal Year =	Tax Year	Tax Year + 1	Tax Year + 2	Tax Year + 3	Tax Year + 4
	0.0%	74.1%	25.7%	0.2%	0.0%

Timing of RAC Revenue Impact



RAC by Employment Size

Tax Years 2006 through 2009

Group by Employment Count	Number of Businesses	Total RAC Claims (Millions)	Percent of Total	Average RAC Claim	Average Iowa Employment
Micro (<10)	77	\$1.8	0.9%	\$10,000	5
Small (10-99)	235	\$18.4	9.0%	\$30,000	44
Medium (100-499)	129	\$23.0	11.3%	\$60,000	223
Large (500+)	41	\$157.8	77.8%	\$1,100,000	1,790
Unknown	42	\$1.9	0.9%	\$30,000	--

Source: Claim data matched to Iowa Workforce Development data

RAC by Industry

Tax Years 2006 through 2009

Industry Classification	Number of Businesses	Total Earned RAC Credit (Millions)	Percent of Total	Average Earned RAC Credit
Machinery Manufacturing	82	\$112.2	35.7%	\$320,000
Transportation Equipment Manufacturing	32	\$92.2	29.4%	\$610,000
Chemical Manufacturing	30	\$45.5	14.5%	\$360,000
Food And Kindred Product Manufacturing	26	\$8.4	2.7%	\$80,000
Credit Intermediation And Related Activities	5	\$6.1	1.9%	\$290,000
Top 20 Industries: Manufacturing	285	\$282.8	90.0%	
Top 20 Industries: All Other	138	\$28.1	8.9%	

RAC Concentration

Automatic and Supplemental Earned Research Activities Tax Credit Claims

Tax Year	Claim Count	Total Earned Claims (Millions)	Total of Top Ten Earned Claims (Millions)	Top Ten Share of Total Credits	Top Ten Share of Total Research
2006	342	\$44.2	\$32.4	73.3%	66.7%
2007	368	\$56.7	\$43.0	75.7%	69.3%
2008	372	\$52.1	\$40.3	77.4%	70.9%
2009	331	\$49.6	\$38.9	78.3%	71.4%
Average	353	\$50.7	\$38.6	76.2%	69.6%

Automatic Earned Research Activities Tax Credit Claims

Tax Year	Claim Count	Total Earned Automatic Claims (Millions)	Automatic Credit Earned by Top Ten (Millions)	Top Ten Share of Automatic
2006	342	\$30.9	\$21.4	69.2%
2007	368	\$37.4	\$26.5	70.7%
2008	372	\$34.8	\$25.0	71.8%
2009	331	\$33.8	\$24.8	73.4%
Average	353	\$34.2	\$24.4	71.3%

Research Expenditures

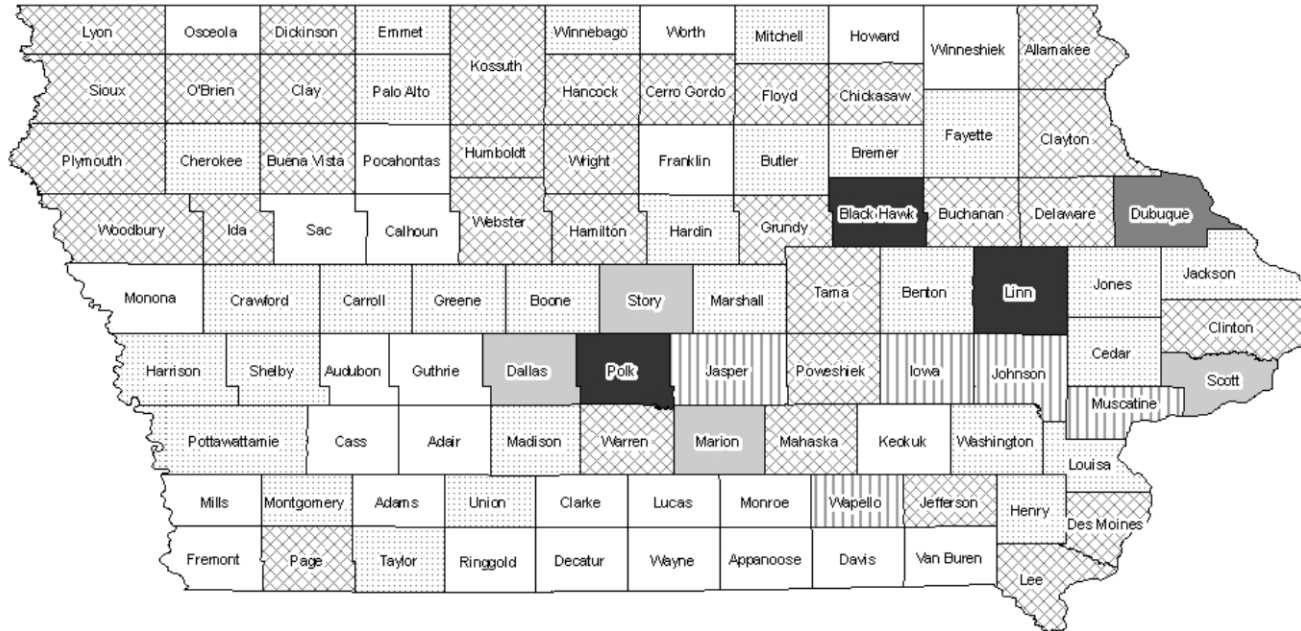
Tax Year	Count	Total Iowa Expenditures (Millions)	Total Credits (Millions)	Credits Per Research Dollar
2006	342	\$1,080.6	\$44.2	\$0.041
2007	368	\$1,290.0	\$56.7	\$0.044
2008	372	\$1,217.5	\$52.1	\$0.043
2009	331	\$1,171.5	\$49.6	\$0.042
Average	353	\$1,189.9	\$50.7	\$0.043

Iowa Qualified Research Expenditures (Millions)

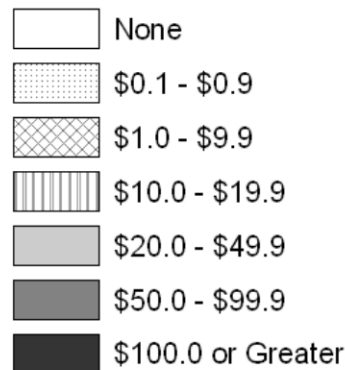
	Wages		Supplies		Computers		Contract Research	
2006	\$706.2	65.4%	\$254.5	23.6%	\$4.1	0.4%	\$115.3	10.7%
2007	\$865.3	67.2%	\$285.5	22.2%	\$3.3	0.3%	\$133.7	10.4%
2008	\$821.8	67.6%	\$277.7	22.9%	\$3.7	0.3%	\$112.0	9.2%
2009	\$783.1	66.9%	\$265.4	22.7%	\$2.7	0.2%	\$118.5	10.1%
Average	\$794.1	66.8%	\$270.8	22.8%	\$3.5	0.3%	\$119.8	10.1%

Source: Iowa 128 and 128A tax forms.

Research Locations, TY 2009



Research Expenditures (Millions)



Source: IA128 and IA128A RAC Claims Data

Survey on Research Activities

- Gather information about research companies in Iowa
 - April 2011 sent to 519 RAC Claimants, TY 2006-09
 - July 2011 sent to 679 potential research companies
- 414 completed
 - 37% response rate, 70% for top 20 claimants
 - 77% of claim dollars
- 207 conducting research in most recent tax year
 - 173 claimed RAC
- 36 with prior RAC claim reported no recent claim
 - No current research/No eligible research
 - Administrative burden too high (5)

Companies Performing Research But Not Claiming RAC

<i>Reasons for No RAC Claim:</i>	Companies with Gross Revenues greater than \$20 million	Companies with Gross Revenues \$20 million or less	Companies with Unavailable Gross Revenues	Total
No Qualified Research in Iowa	1	1	0	2
Not Eligible for Credit	1	5	0	6
Administrative Burden Too High	4	3	1	8
Not Aware of Credit	2	5	2	9
Unsure if Research Qualifies	4	8	0	12
Other	1	7	2	10

Survey: Research Employment

	Companies with Gross Revenues Greater than \$20 million	Companies with Gross Revenues \$20 million or less	Total
Total Research FTEs	12,610	752	13,378
Distribution of Research FTEs	94.3%	5.6%	100.0%
Average Research FTEs	143	8	73
Average Research Wages per FTE	\$65,026	\$57,955	\$60,877
Count Reporting Research MA+	74	87	164
Total Research MA+	2,781	92	2,878
Distribution of Research MA+ FTEs	96.6%	3.2%	100.0%
Share of FTEs at Same Companies	23.7%	13.3%	23.1%

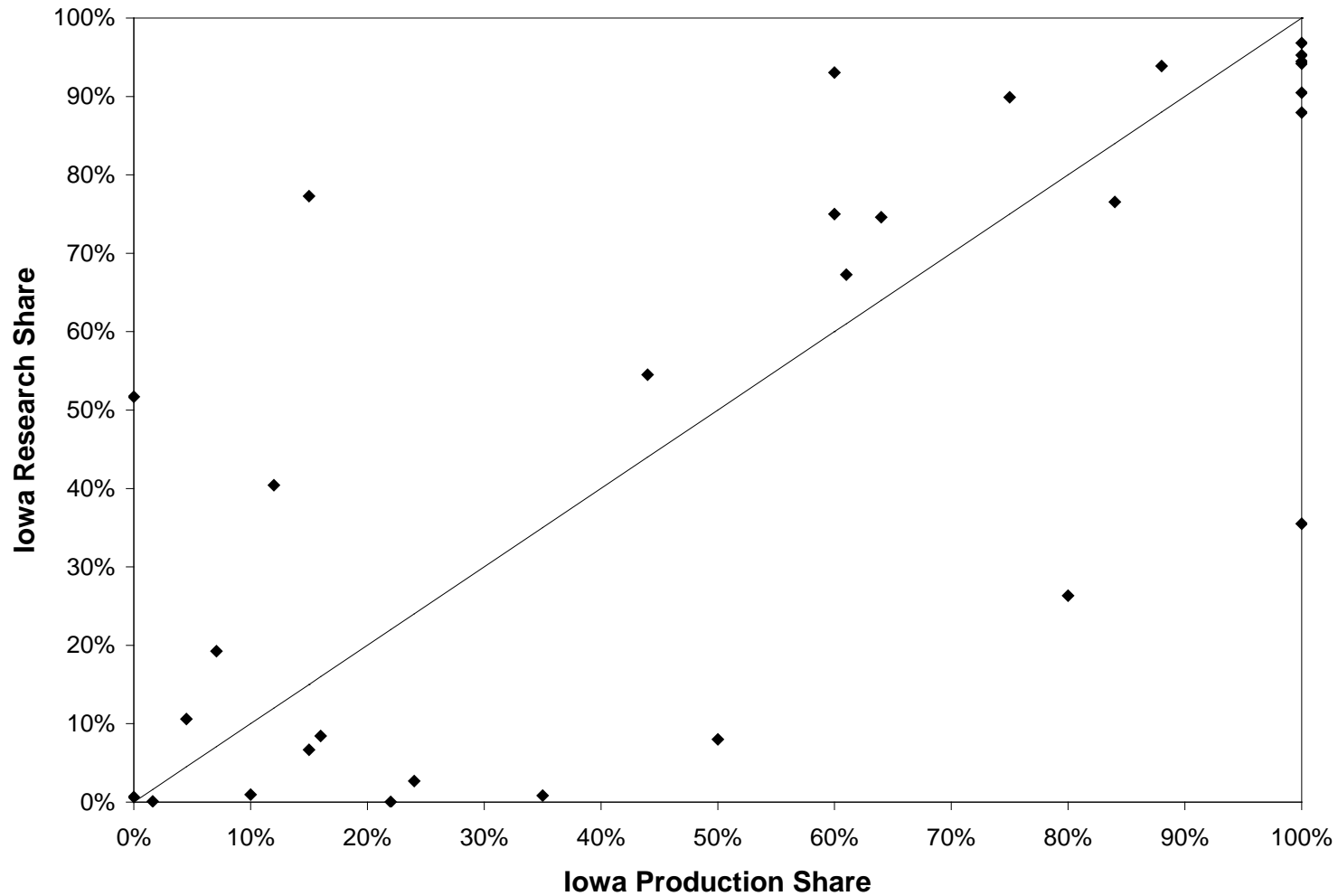
Survey: Research Decisions

- Respondents ranked importance of various items when choosing to expand research in Iowa
 - 90% or more of all respondents indicated the following as important:
 - Quality of workforce
 - State business tax climate
 - Quality of life for employees
 - Low cost of labor and other research inputs
 - 90% or more of multi-state research respondents indicated the following as important:
 - Quality of workforce
 - Existing research facility
 - Quality of life for employees
 - Low cost of labor and other research inputs

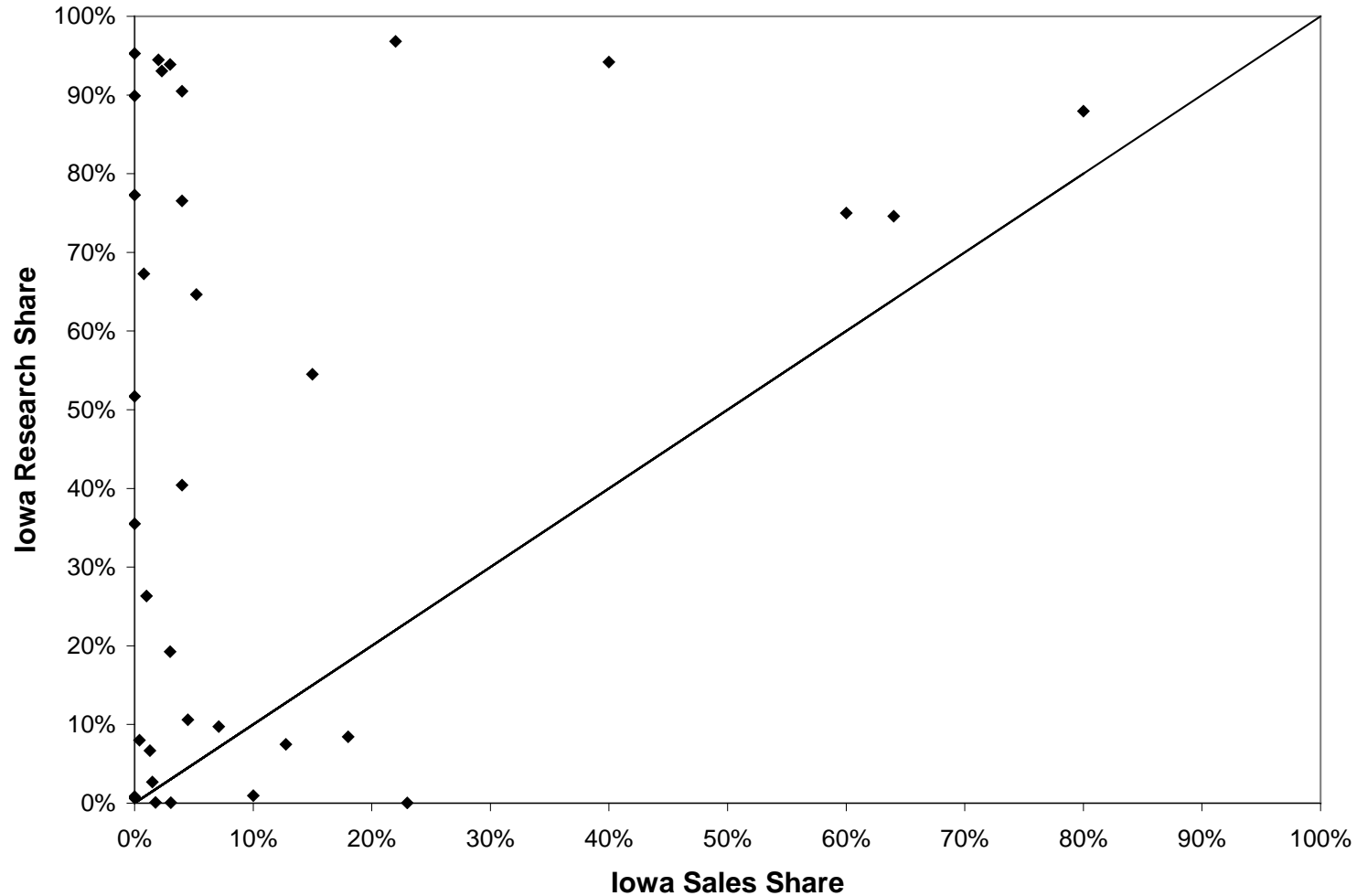
Survey: Out-of-State Research

		Iowa Research Expenditures (Millions)	
Companies with Out-of-State Research	44	Total	Average
Average Number of Other States	5	\$765.9	\$18.2
Census Division	Companies Conducting Research in Each State	Total Expenditures for Division	Average Expenditures by State
Minnesota, Missouri, Nebraska, North Dakota, South Dakota	36	\$256.6	\$7.8
Illinois, Indiana, Michigan, Ohio, Wisconsin	32	\$195.5	\$6.7
D.C., Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia	28	\$459.5	\$17.7
Alaska, California, Hawaii, Oregon, Washington	21	\$183.3	\$9.2
New Jersey, New York, Pennsylvania	15	\$17.8	\$1.2
Alabama, Kentucky, Mississippi, Tennessee	14	\$42.4	\$3.5
Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	13	\$15.4	\$1.4
Arkansas, Louisiana, Oklahoma, Texas	13	\$54.1	\$4.5
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	5	\$10.3	\$2.1

Survey: Research Shares vs Production Shares



Survey: Research Shares vs Sales Shares



Survey: Research Outcomes

- Respondents asked about new products in Iowa
 - 65% reported a new product or service produced in Iowa during last 4 years as a result of research in Iowa
 - 135 companies reported 1,909 new production jobs
 - Does not include jobs saved

- Respondents asked about patents awarded
 - 37% reported a new patent awarded during last 4 years as a result of research in Iowa

Start-Ups and RAC

- Do Start-ups in Iowa take advantage of the RAC?
- Survey: Sixteen companies started research in Iowa in 2006 or later
 - Nine could be matched to RAC claims by TY2010
 - Average claim \$15,000
- Wider analysis: IWD identified 3,400 Iowa businesses starting in 2006 or later in research industries
 - 1.3% matched to RAC claim for TY 2006-2009

Hypothetical Firm Analysis

Iowa-Only Research Firms	U.S. Research Expenditures (Millions)	Iowa Research Expenditures (Millions)	Iowa Research as Share of Iowa Gross Revenues	Iowa Corporate Tax Liability	Share of Iowa Total Research Expenditures
Micro (<10)	\$0.22	\$0.22	21.1%	\$1,723	1.2%
Small (10-99)	\$0.47	\$0.47	4.6%	\$8,582	7.4%
Medium (100-499)	\$1.23	\$1.23	2.2%	\$43,542	7.7%
Large (500+)	\$12.40	\$12.40	2.3%	\$0	6.1%

Multi-State Research Firms	U.S. Research Expenditures (Millions)	Iowa Research Expenditures (Millions)	Iowa Research as Share of Iowa Gross Revenues	Iowa Corporate Tax Liability	Share of Iowa Total Research Expenditures
Micro (<10)	\$4.43	\$0.22	17.4%	\$282	0.4%
Small (10-99)	\$11.09	\$1.31	2.1%	\$22,699	7.8%
Medium (100-499)	\$54.87	\$1.61	2.1%	\$129,494	8.5%
Large (500+)	\$64.48	\$20.43	2.0%	\$72,990	60.8%

Source: Hypothetical firms are based on IA 128 and IA 128A data from RAC claimants for tax year 2008.

- Neighbors: MN, NE, WI & Survey Top 10: CA, IN, KS, OH, NY
- Others: IL, MO, TX

Compare State Research Credits

Hypothetical Firm - In-State Research				Hypothetical Firm - Multi-State Research			
State	Total	Claimed	Carried Forward	State	Total	Claimed	Carried Forward
Micro (1 to 9 Employees)							
Indiana/California	\$16,339	\$1,723	\$14,616	Indiana	\$17,007	\$282	\$16,725
Minnesota	\$10,893	\$10,893	NA	Minnesota	\$8,726	\$8,726	NA
Iowa	\$7,080	\$7,080	NA	Iowa	\$7,738	\$7,738	NA
Small (10 to 99 Employees)							
Indiana	\$22,842	\$8,582	\$14,260	Indiana	\$63,944	\$22,699	\$41,245
Minnesota	\$11,593	\$11,593	NA	Minnesota	\$34,653	\$34,653	NA
Iowa	\$10,393	\$10,393	NA	Iowa	\$29,094	\$29,094	NA
Medium (100 to 499 Employees)							
Indiana/California	\$91,957	\$43,542	\$48,415	Indiana/California	\$120,584	\$120,584	\$0
Minnesota	\$61,305	\$61,305	NA	Minnesota	\$80,389	\$80,389	NA
Iowa	\$39,848	\$39,848	NA	Iowa	\$52,253	\$52,253	NA
Large (500 or More Employees)							
Indiana	\$404,821	\$0	\$404,821	California	\$1,532,567	\$72,990	\$1,459,576
Minnesota	\$212,320	\$212,320	NA	Iowa	\$664,112	\$664,112	NA
Iowa	\$184,194	\$184,194	NA	Minnesota	\$405,428	\$405,428	NA

Large Firm Research Location Decision: Credits and Wages

State	Average, Median Hourly Wage for Research Occupations, 2010	Estimated Research Hours for \$13.7 Million in Wage Expenditures	Foregone Labor Inputs Compared to Iowa	Difference from Iowa in Research Credits Claimed in Tax Year ¹	Net Cost of Foregone Labor Inputs and Difference in Research Credits
Iowa	\$33.10	412,000	(Millions)	(Millions)	(Millions)
Minnesota	\$37.44	365,000	-\$1.76	-\$0.26	-\$2.02
Nebraska	\$32.86	416,000	\$0.13	-\$0.32	-\$0.19
New York	\$38.93	351,000	-\$2.37	-\$0.46	-\$2.83
California	\$44.21	309,000	-\$4.55	-\$0.59	-\$5.14
Indiana	\$33.12	412,000	\$0.00	-\$0.59	-\$0.59
Ohio	\$35.35	386,000	-\$0.92	-\$0.59	-\$1.51
Wisconsin	\$33.34	410,000	-\$0.07	-\$0.59	-\$0.66
Kansas	\$33.99	402,000	-\$0.34	-\$0.59	-\$0.93
Illinois	\$37.31	366,000	-\$1.72	-\$0.66	-\$2.38
Texas	\$39.48	346,000	-\$2.61	-\$0.66	-\$3.27
Missouri	\$35.21	388,000	-\$0.84	-\$0.66	-\$1.51
South Dakota	\$29.43	464,000	\$1.53	-\$0.66	\$0.87

Final Thoughts

- Credit results in refunds to many taxpayers
- Credits average 4.3 cents per dollar of research in Iowa
- Survey respondents indicated business tax climate is important factor in research decisions
- Attempts to estimate credit's impact on research expenditures using survey data were unsuccessful
- Evaluation study should be released in January
- Questions?