

Dynamic Fiscal Analysis: Increasing Minimum Wage in Illinois

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REMI

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- The contents and opinions expressed in this presentation are our own and do not represent a statement of policy on behalf of the Governor of Illinois.

Addendum (6/20/18):

Nor does this represent a policy position endorsement by REMI.

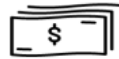
Literature Review

- Government policy to increase minimum wage has always been a controversial topic.
- Various methods in estimating the effect of minimum wage:
 - Time series: the employment-to-population ratio for a particular demographic group, especially young age workers (Neumark and Wascher, 1992, Bernstein and Schmitt 2000)
 - Difference in difference: employment in fast-food restaurants before and after an increase in the minimum wage in New Jersey (Katz and Krueger, 1992)
 - Panel data: Regional variation as response to the federal minimum wage increase (Card 1992), Burkhauser et al. (2000)
 - Case study : The effect of federal minimum wage on fast-food restaurants in Texas (Katz and Krueger 1991)
- Limitations:
 - Backward outlook based on historical data
 - Studies on minimum wage generally employ one-way effect
 - Does not account for dynamic effect of minimum wage policy
 - Case study: adequacy of the control groups, generalizability of findings
 - Interview/survey: data reliability, self-reported bias

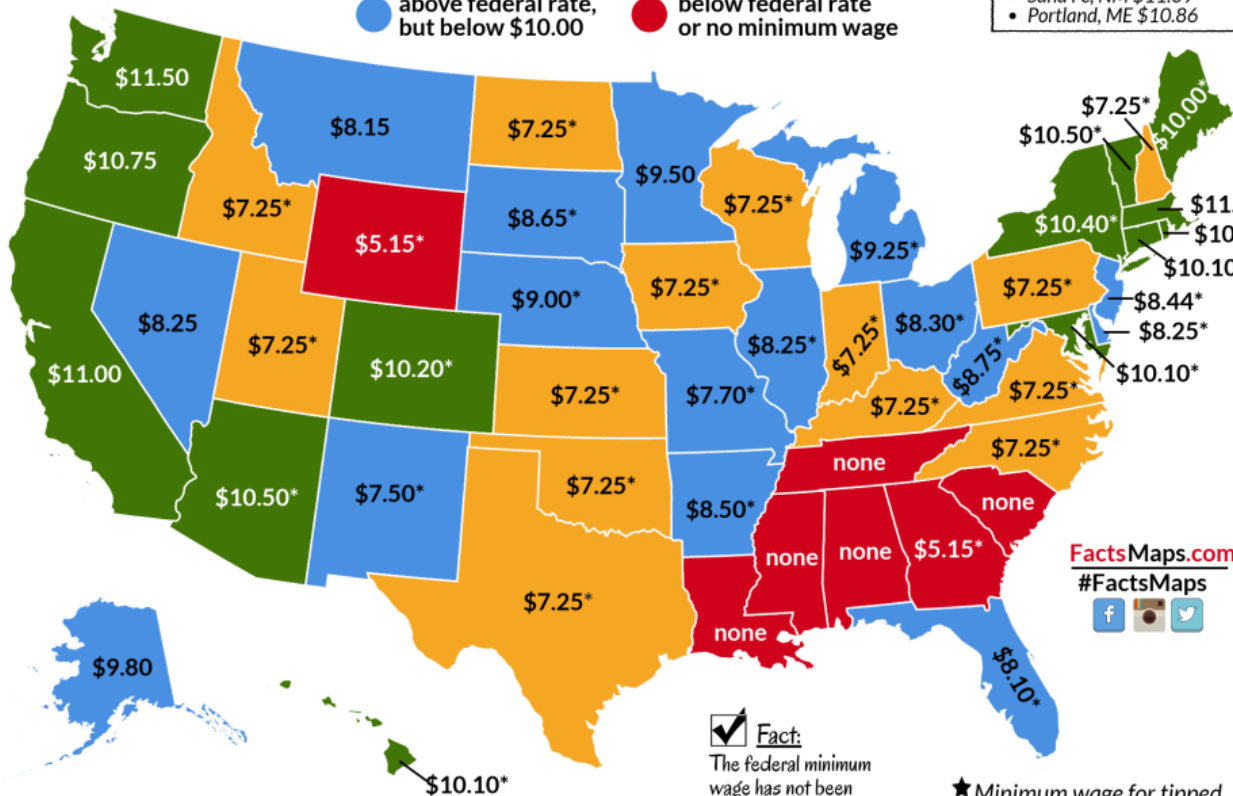
Mixed findings

- On youth employment
 - No effect (Card 1992)
 - Negative effect (Neumark and Wascher 1992)
- Cumulative evidence on the effects of the minimum wage
 - An increase in minimum wage has negative effects on the job opportunities for low and unskilled workers (Goldfarb, 1974).
- Proponents:
 - Increasing purchasing power of those at the lowest income bracket
 - Reducing poverty
- Opponents:
 - Layoff, especially unskilled workers
 - Hit labor-intensive industries
 - Hit small-medium employers
 - Reducing state competitiveness

Minimum Wage by U.S. State as of July 1, 2018



- above \$10.00
- above federal rate, but below \$10.00
- federal rate
- below federal rate or no minimum wage



- Some local minimum wage rates:**
- San Francisco, CA \$15.00
 - Berkley, CA \$15.00
 - Los Angeles, CA \$15.00
 - Washington, DC \$13.25
 - New York City, NY \$13.00*
 - Oakland, CA \$12.86
 - San Jose, CA \$12.00
 - Portland, OR \$12.00
 - Sana Fe, NM \$11.09
 - Portland, ME \$10.86

- Washington 11.50
- California 11.00
- Massachusetts 11.00*
- Oregon 10.75
- Arizona 10.50*
- Vermont 10.50*
- New York 10.40*
- Colorado 10.20*
- Maryland 10.10*
- Connecticut 10.10*
- Hawaii 10.10*
- Rhode Island 10.10*
- Maine 10.00*
- Alaska 9.80
- Minnesota 9.50
- Michigan 9.25*
- Nebraska 9.00*
- West Virginia 8.75*
- South Dakota 8.65*
- Arkansas 8.50*
- New Jersey 8.44*
- Ohio 8.30*
- Delaware 8.25*
- Illinois 8.25*
- Nevada 8.25
- Montana 8.15
- Florida 8.10*
- Missouri 7.70*
- New Mexico 7.50*
- Idaho 7.25*
- Indiana 7.25*
- Iowa 7.25*
- Kansas 7.25*
- Kentucky 7.25*
- New Hampshire 7.25*
- North Carolina 7.25*
- North Dakota 7.25*
- Oklahoma 7.25*
- Pennsylvania 7.25*
- Texas 7.25*
- Utah 7.25*
- Virginia 7.25*
- Wisconsin 7.25*
- Georgia 5.15*
- Wyoming 5.15*
- Alabama none
- Louisiana none
- Mississippi none
- South Carolina none
- Tennessee none

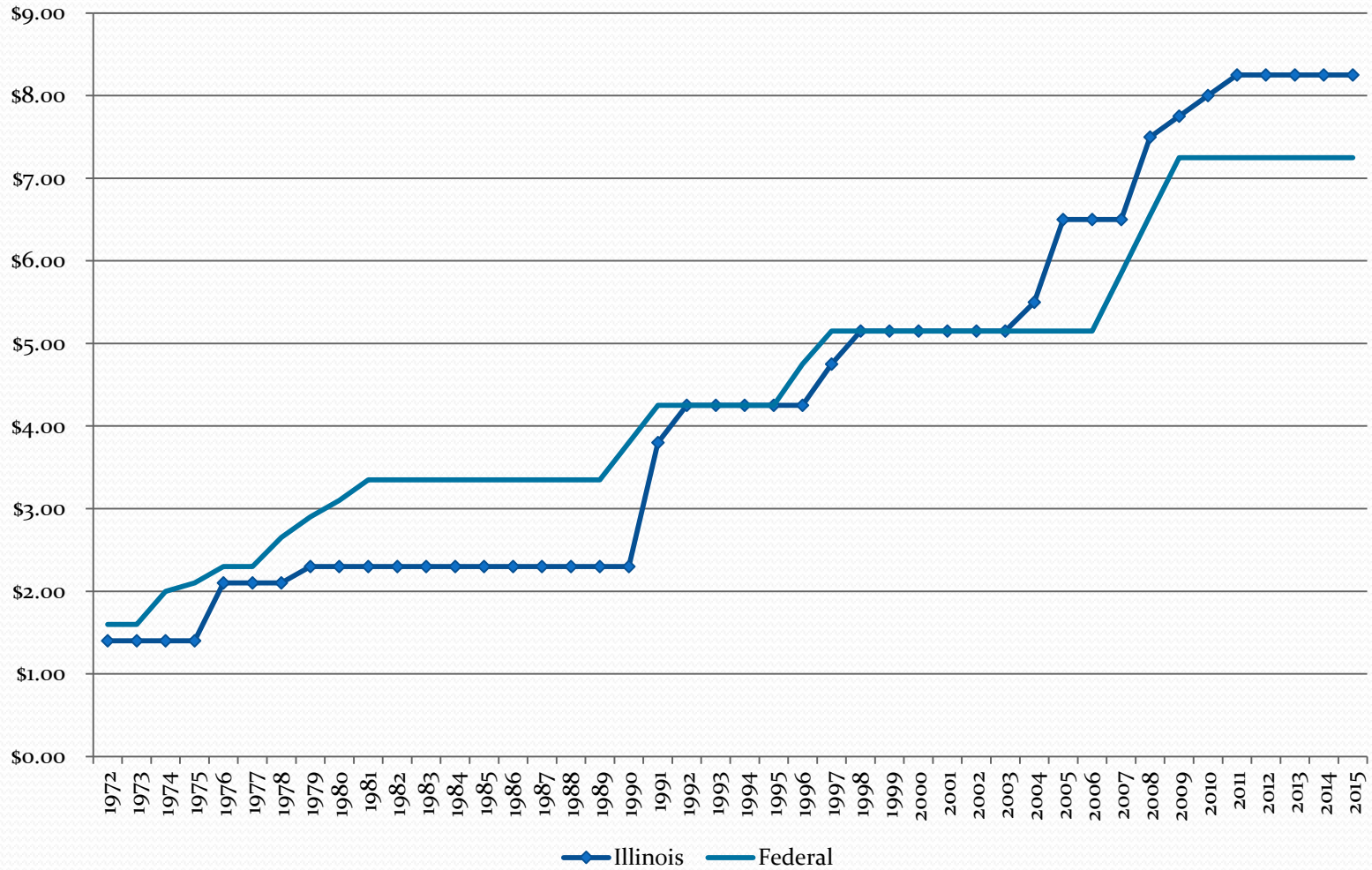
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Fact:
The federal minimum wage has not been changed since July, 2009

★ Minimum wage for tipped professions and/or small businesses is less

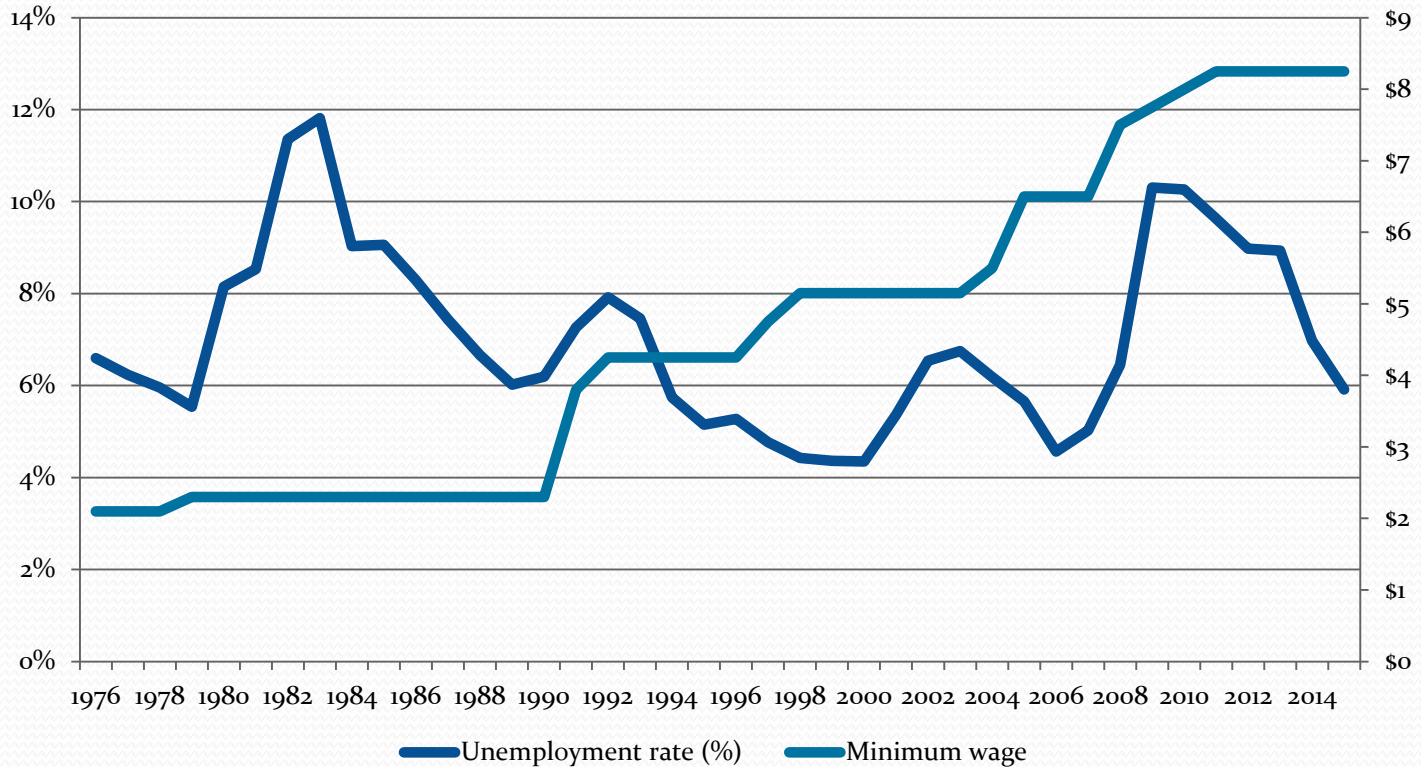
Source: United States Department of Labor, state & local web sites

Minimum Wage evolution IL vs US 1972-2015



Historical Records of Unemployment and Minimum Wage in Illinois

Unemployment and Minimum Wage in Illinois



Illinois minimum wage legislation was proposed in response to Chicago's recently passed ordinance (December 2014):

Chicago's Minimum Wage - Implementation Timeline

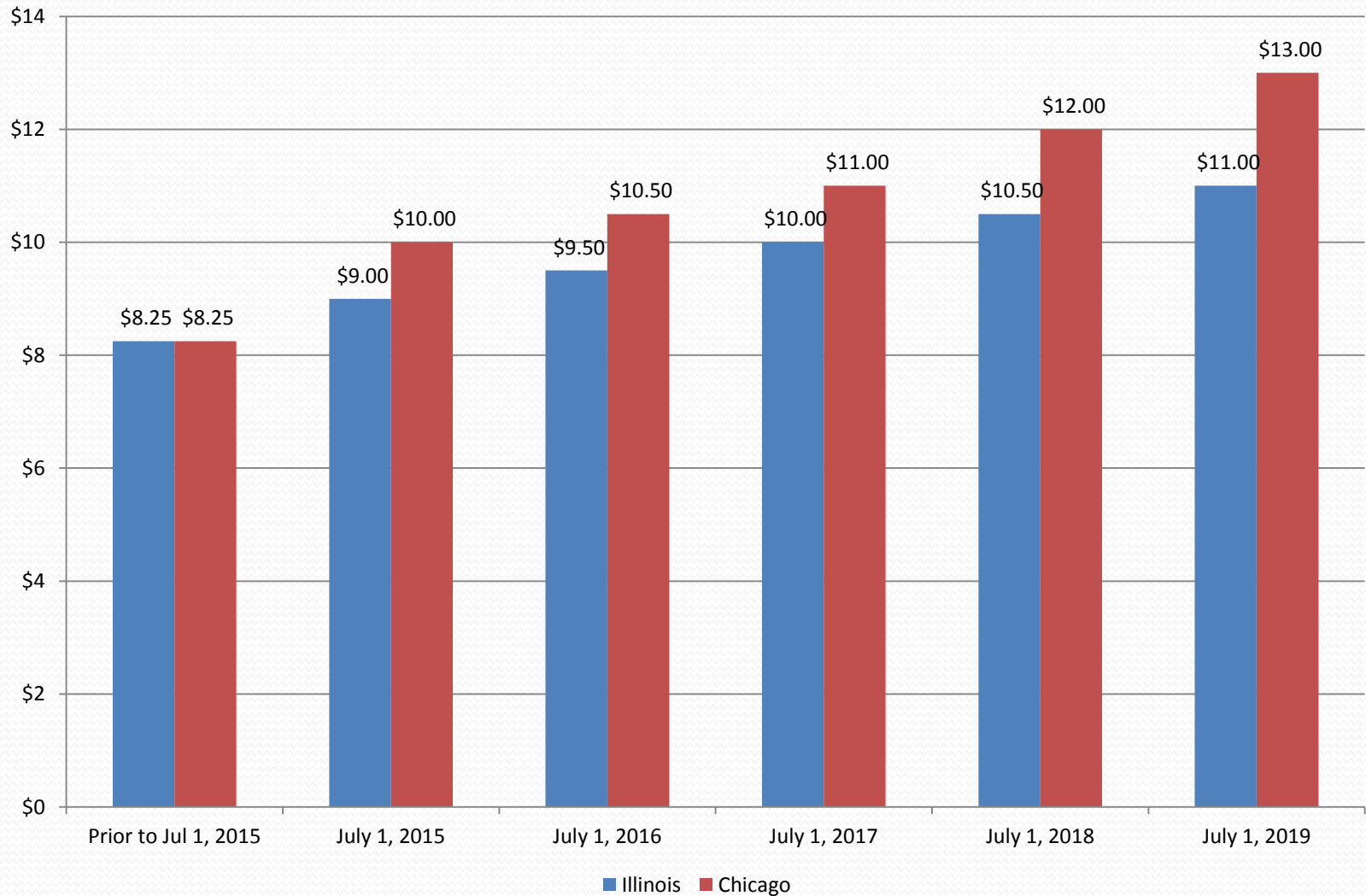
Effective Date	Non-Tipped Employees	Tipped Employees
Current	\$8.25	\$4.95
July 1, 2015	\$10.00	\$5.45
July 1, 2016	\$10.50	\$5.95
July 1, 2017	\$11.00	Increases with CPI
July 1, 2018	\$12.00	Increases with CPI
July 1, 2019	\$13.00	Increases with CPI
July 1, 2020	Increases with CPI	Increases with CPI

SYNOPSIS - SB 2145

- Increases the minimum wage from \$8.25 to \$9.00 beginning July 1, 2015 and increases it by \$0.50 each July 1 until July 1, 2019, at which point the minimum wage will be \$11.00.
- Limitation on home rule powers does not apply to a specified ordinance adopted by the City Council of City of Chicago.
- Creates a credit against the withholding tax liability of employers with fewer than 50 employees.

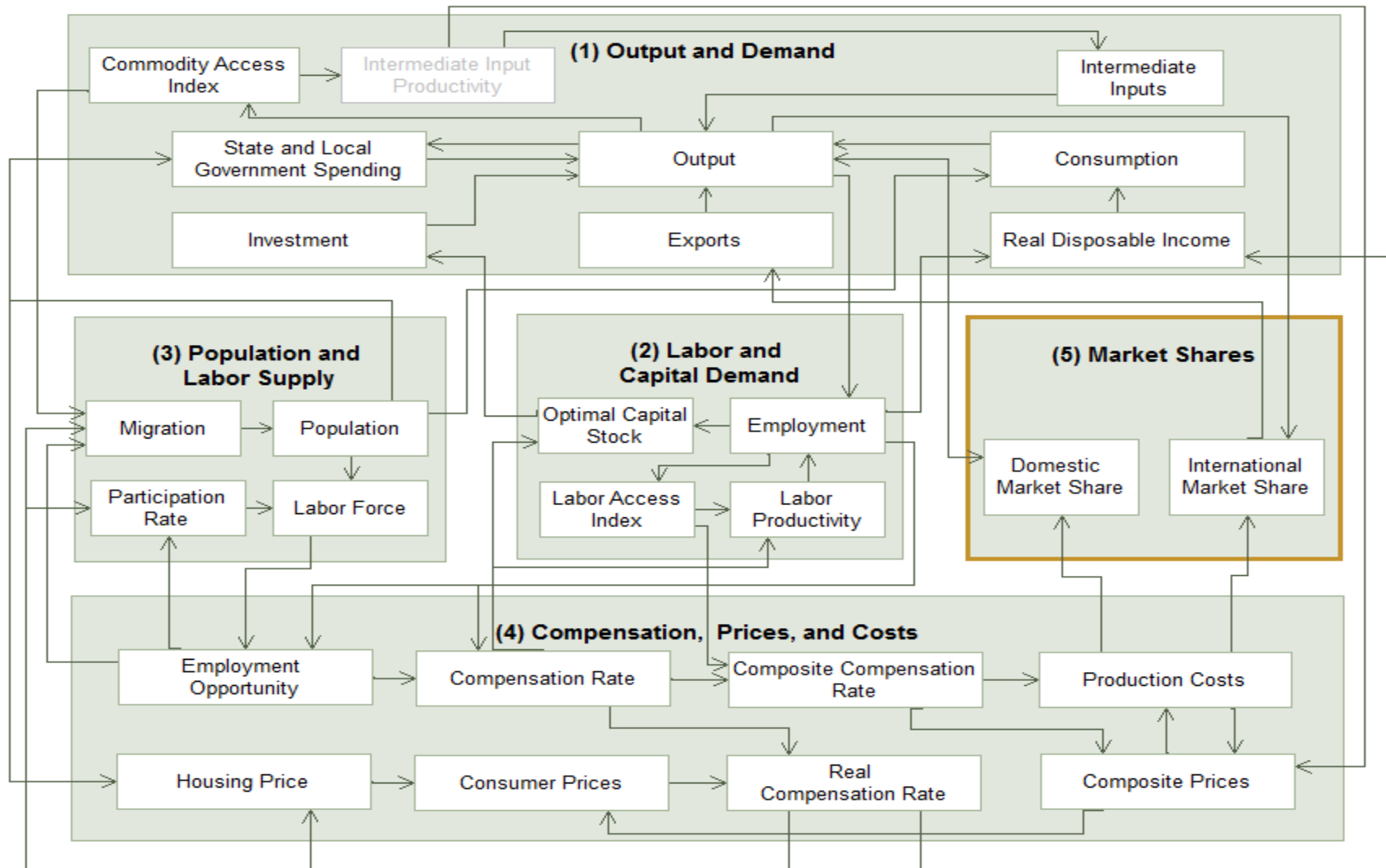
Timeline – SB 2145

Timeline of minimum wage increase



METHODOLOGY

- Data source: 2015 Current Population Survey from U.S. Census



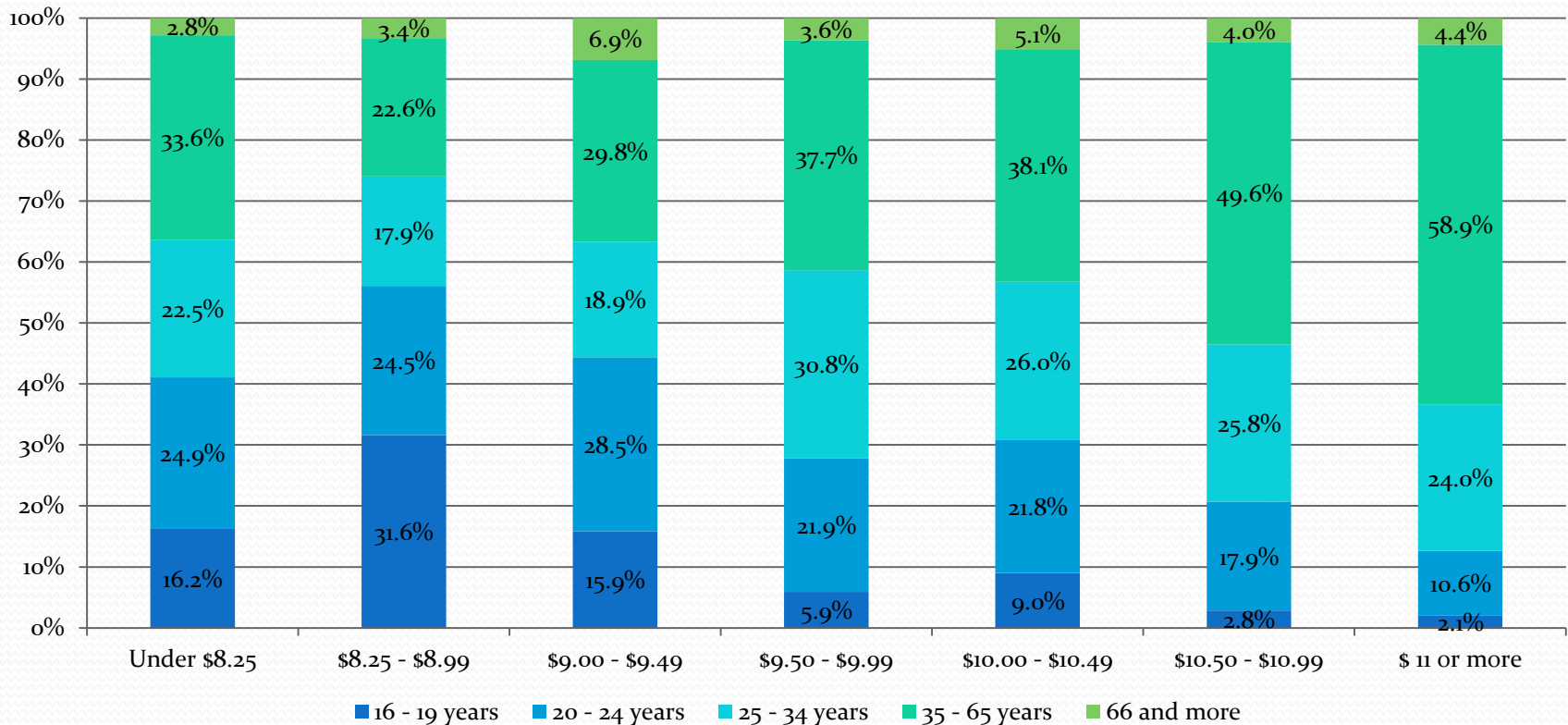
Workers by Wage Rate and Industry in Illinois, 2015

Industry	Under \$8.25	\$8.25 - \$8.99	\$9.00 - \$9.49	\$9.50 - \$9.99	\$10.00 - \$10.49	\$10.50 - \$10.99	\$ 11 or more	Total
Leisure and hospitality	51,075	65,895	41,120	9,865	52,163	10,039	191,968	422,125
Wholesale and retail trade	22,121	57,561	39,180	19,476	54,454	17,469	292,723	502,984
Educational and health services	14,365	30,449	24,000	13,856	52,864	13,807	550,621	699,962
Transportation and utilities	8,845	2,767	2,886	3,600	12,301	3,999	153,111	187,509
Other services	8,704	15,298	9,821	5,541	21,051	1,160	101,205	162,780
Professional and business services	8,661	7,583	16,520	8,753	27,951	4,678	188,526	262,672
Manufacturing	7,619	12,414	2,818	14,507	32,805	5,231	322,335	397,729
Financial activities	3,187	2,015	4,362	3,140	12,669	5,659	124,431	155,463
Construction	2,674	1,138	-	-	10,668	1,131	157,022	172,633
Agriculture, forestry, fishing, and hunting	1,174	-	-	2,239	-	1,081	11,478	15,972
Information	997	3,340	-	-	6,578	2,050	42,769	55,734
Mining	-	-	-	-	-	-	5,568	5,568
Public administration	-	-	1,727	2,343	6,675	2,237	101,195	114,177
Total hourly workers	129,422	198,460	142,434	83,320	290,179	68,541	2,242,952	3,155,308
Total hourly workers (in %)	4.1%	6.3%	4.5%	2.6%	9.2%	2.2%	71.1%	100.0%

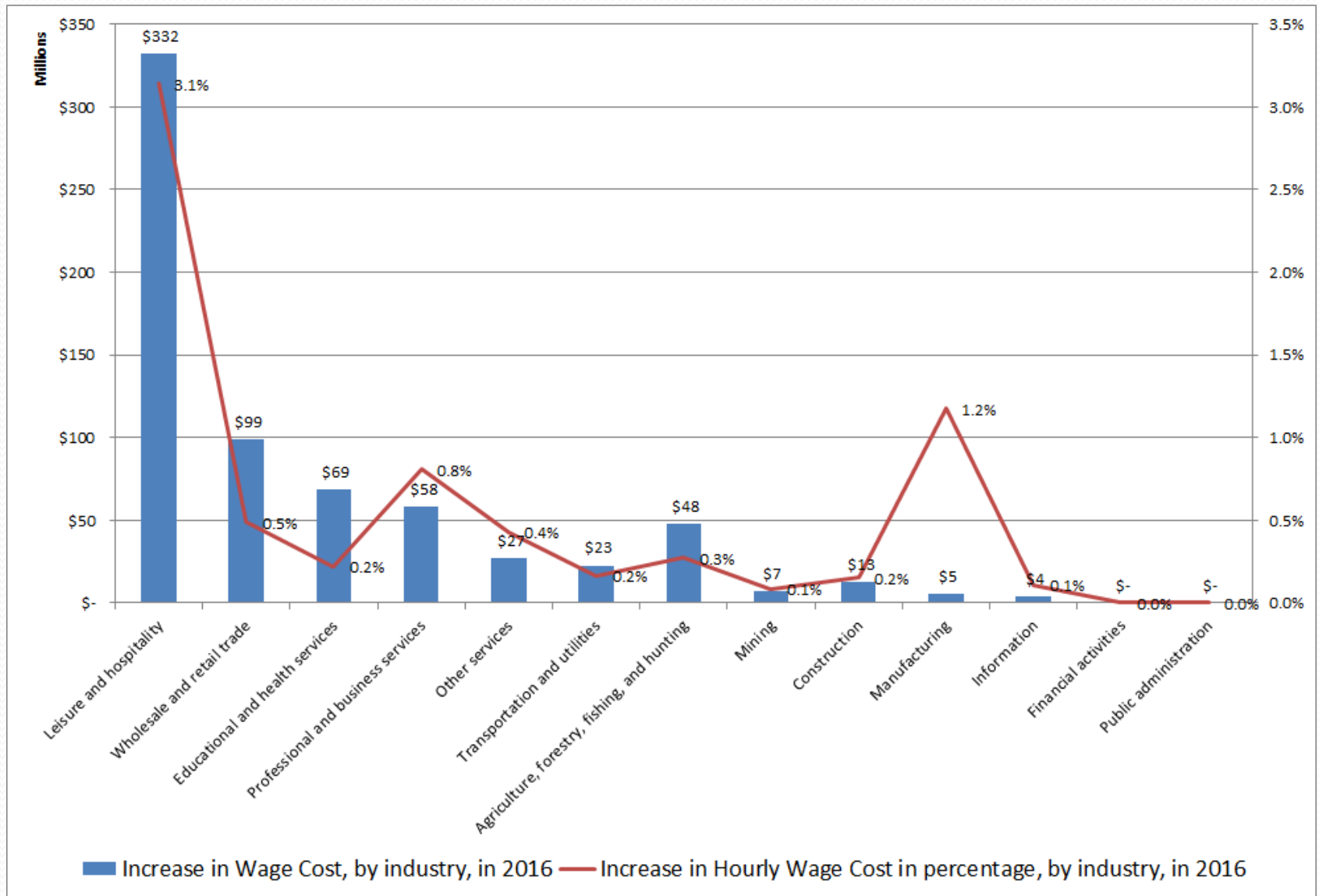
Workers by Wage Rate and Age Cohort in Illinois, 2015

Age cohort	Under \$8.25	\$8.25 - \$8.99	\$9.00 - \$9.49	\$9.50 - \$9.99	\$10.00 - \$10.49	\$10.50 - \$10.99	\$ 11 or more	Total
16 - 19 years	21,005	62,772	22,584	4,933	26,069	1,936	46,004	185,303
20 - 24 years	32,179	48,549	40,642	18,254	63,268	12,259	238,184	453,335
25 - 34 years	29,131	35,594	26,935	25,677	75,379	17,671	538,648	749,035
35 - 65 years	43,500	44,875	42,498	31,439	110,691	33,963	1,322,143	1,629,109
66 and more	3,607	6,671	9,776	3,017	14,770	2,713	97,974	138,528
Total Hourly Workers	129,422	198,461	142,435	83,320	290,177	68,542	2,242,953	3,155,310

Distribution of workers by wage rate and age cohort in Illinois, 2015



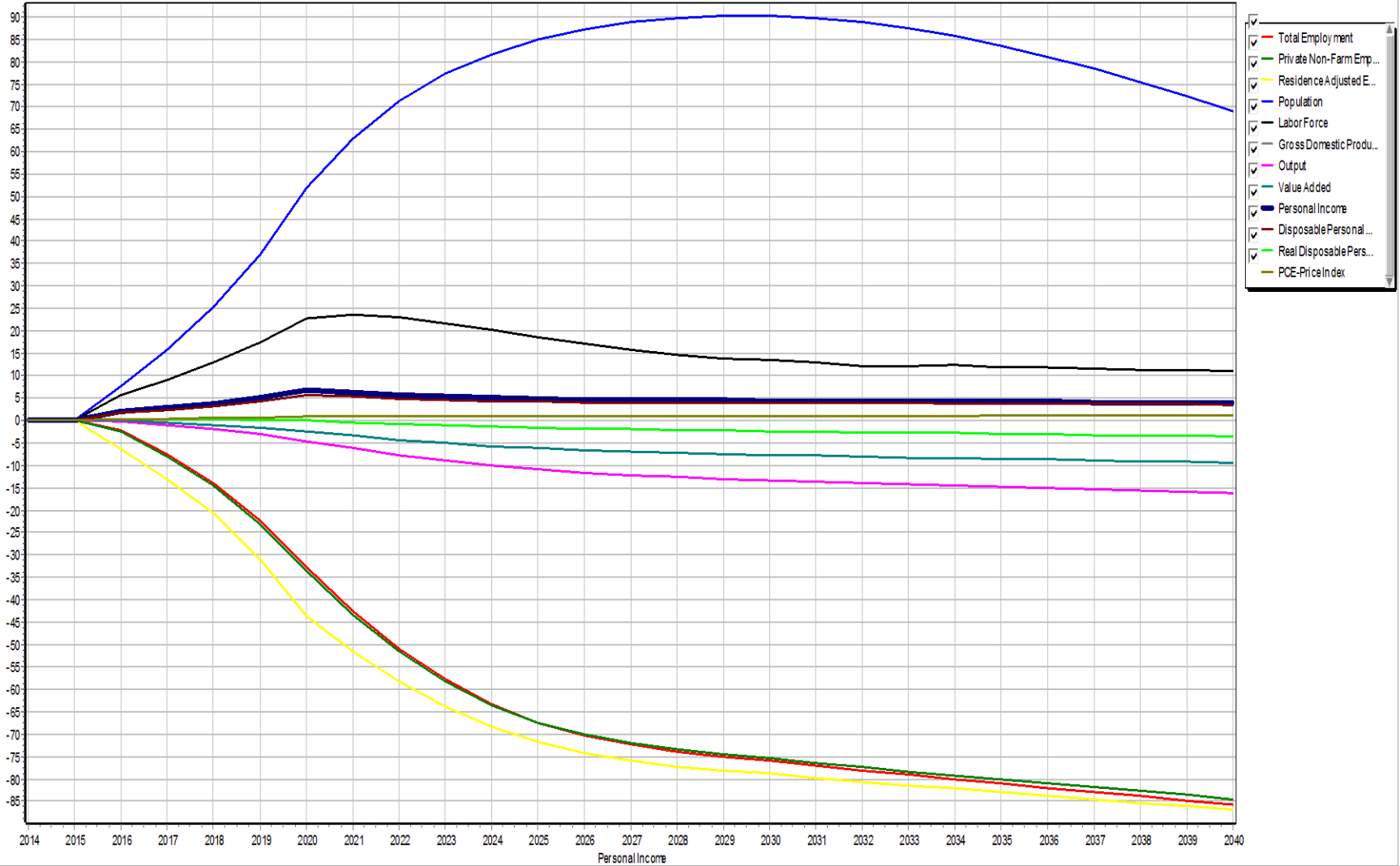
Wage cost effect of minimum wage increase (by industry, 2016)



Industry	additional cost per industry at given minimum wage				
	\$9	\$9.50	\$10	\$10.50	\$11
Leisure and hospitality	3.1%	4.3%	5.6%	7.2%	9.1%
Wholesale and retail trade	0.5%	0.9%	1.5%	2.2%	3.1%
Educational and health services	0.2%	0.4%	0.6%	0.9%	1.3%
Professional and business services	0.8%	1.0%	1.2%	1.5%	1.9%
Other services	0.4%	0.8%	1.3%	2.0%	2.8%
Transportation and utilities	0.2%	0.3%	0.6%	0.9%	1.4%
Agriculture, forestry, fishing, and hunting	0.3%	0.4%	0.5%	0.8%	1.2%
Mining	0.1%	0.2%	0.3%	0.5%	0.8%
Construction	0.2%	0.2%	0.2%	0.3%	0.5%
Manufacturing	1.2%	1.4%	1.9%	2.6%	3.3%
Information	0.1%	0.2%	0.3%	0.5%	0.8%
Financial activities	0.0%	0.0%	0.0%	0.0%	0.0%
Public administration	0.0%	0.0%	0.1%	0.2%	0.4%
Armed Forces	0.0%	0.0%	0.0%	0.0%	0.0%
Annual increase in wage costs	0.5%	0.8%	1.1%	1.6%	2.2%

REMI RESULTS:

Economic Summary



REMI RESULTS

Min wage 11 AM Oct 2017.rwb

Regional Simulation 1 compared to Standard Regional Control - Difference

Region = Illinois

Browser

Tax-PI Illinois v1.7.106 (Build 4117)

Category	Units	2016	2020	2025	2030	2035	2040
Total Employment	Thousands (Jobs)	-2.271751145	-32.62302183	-67.50318335	-75.89974241	-80.96045088	-85.8161734
Private Non-Farm Employment	Thousands (Jobs)	-2.583069282	-33.55922967	-67.49734161	-75.38554662	-80.08800301	-84.47847817
Residence Adjusted Employment	Thousands	-6.540968809	-43.74842183	-71.82264984	-78.76935646	-82.94073281	-86.8374661
Population	Thousands	7.594595154	51.83116945	84.91074063	90.20977751	83.54279746	68.93968634
Labor Force	Thousands	5.744325122	22.77052476	18.5824221	13.36035975	11.94608118	11.03403999
Gross Domestic Product	Billions of Fixed (2009) Dollars	-0.083590601	-2.503895819	-6.232388474	-7.723099728	-8.611011088	-9.51979869
Output	Billions of Fixed (2009) Dollars	-0.230677694	-4.590997684	-10.97109103	-13.43465767	-14.87841642	-16.35545817
Value Added	Billions of Fixed (2009) Dollars	-0.083590601	-2.503895819	-6.232388474	-7.723099728	-8.611011088	-9.51979869
Personal Income	Billions of Current Dollars	2.054362677	6.625622652	4.799209035	4.381552551	4.177634066	3.861782084
Disposable Personal Income	Billions of Current Dollars	1.726869466	5.594596174	4.184690407	3.911349205	3.762897085	3.491168569
Real Disposable Personal Income	Billions of Fixed (2009) Dollars	0.369571032	0.038248003	-1.687056978	-2.43101572	-2.960414114	-3.56179488
PCE-Price Index	2009=100 (Nation)	0.236615531	0.895792079	0.913767452	0.957724187	1.026287873	1.105799942

So, what did REMI say?

- **Negative effect on employment**
 - Given that increase in wage is not due to increase in productivity, workforce will be reduced to compensate for increase in labor cost.
- **Negative effect on Gross Domestic Product**
 - Higher labor cost & higher cost of goods and services have a detrimental effect on competitiveness. This leads to decrease in exports and business investment.
- **Negative effect on prices**
 - Raising labor cost will be translated into higher prices.
- **Positive effect on Personal (and disposable) income**
 - Raising minimum wage will increase earnings – personal income- of eligible workers (those that remain employed)
- **Negative effect on Real personal disposable income**
 - Given the increase in prices, there is a negative effect on real personal income.
- **Positive effect on population growth.**
 - Increased net economic migrants, probably explained by an improved consumption access index in IL and by improved relative real compensation rate in the state.

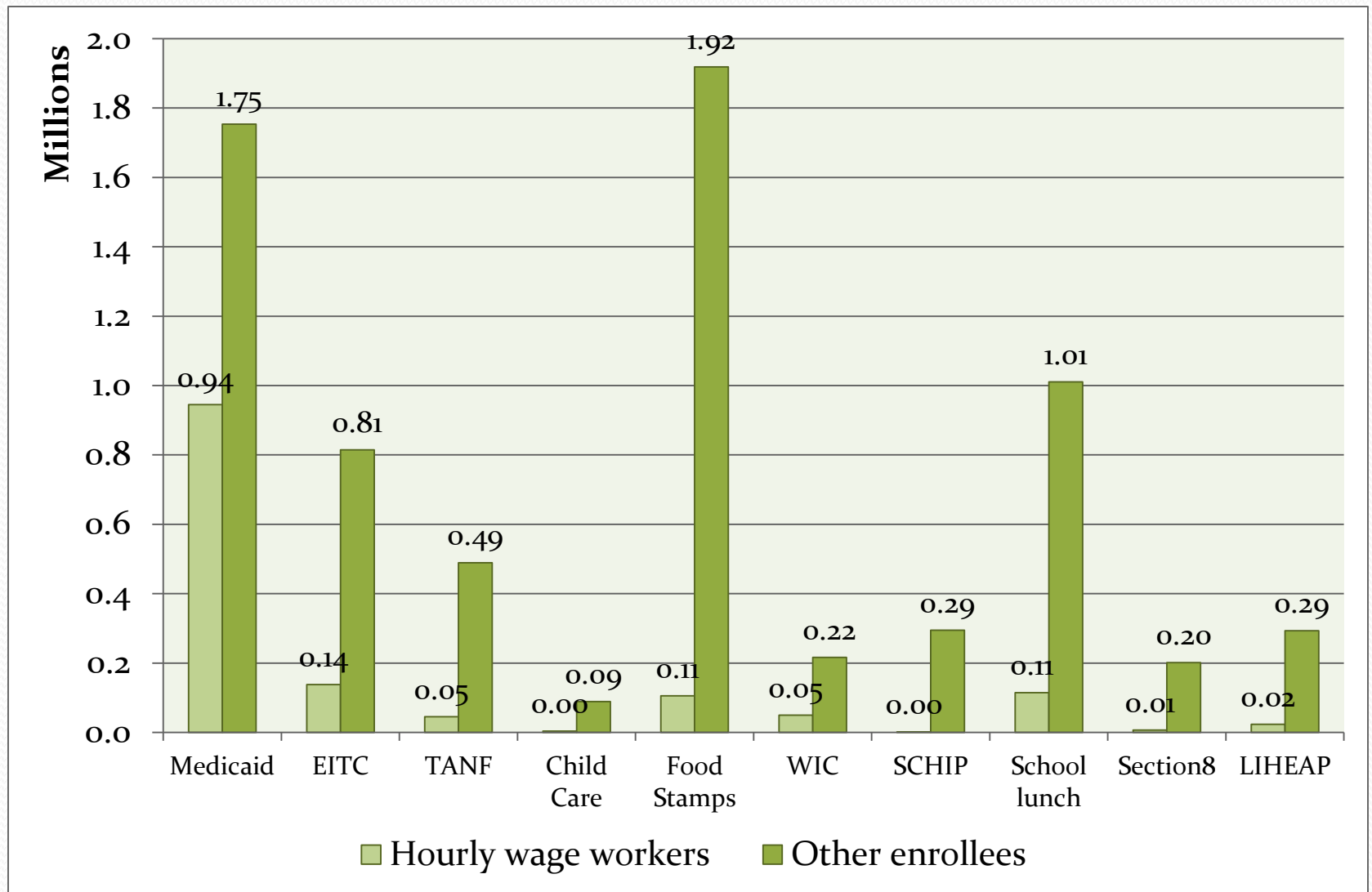
Increase in Min. Wage - Other Effects: Public Assistance Programs:

- As the recipient's income increases due to higher wage per hour, she/he might not be longer eligible to receive public assistance since her/his total income is greater than the maximum income limit.
- **Illinois participates in 10 public assistance programs:**
 - Medicaid,*
 - The Earned Income Tax Credit,*
 - TANF,*
 - Child Care,*
 - Food Stamps,*
 - Women, Infants, and Children Nutrition Program (WIC),*
 - Healthy Families (SCHIP),*
 - Free or Reduced Price Lunch,*
 - Section 8 Rental Assistance and*
 - Low Income Heat and Energy Assistance*

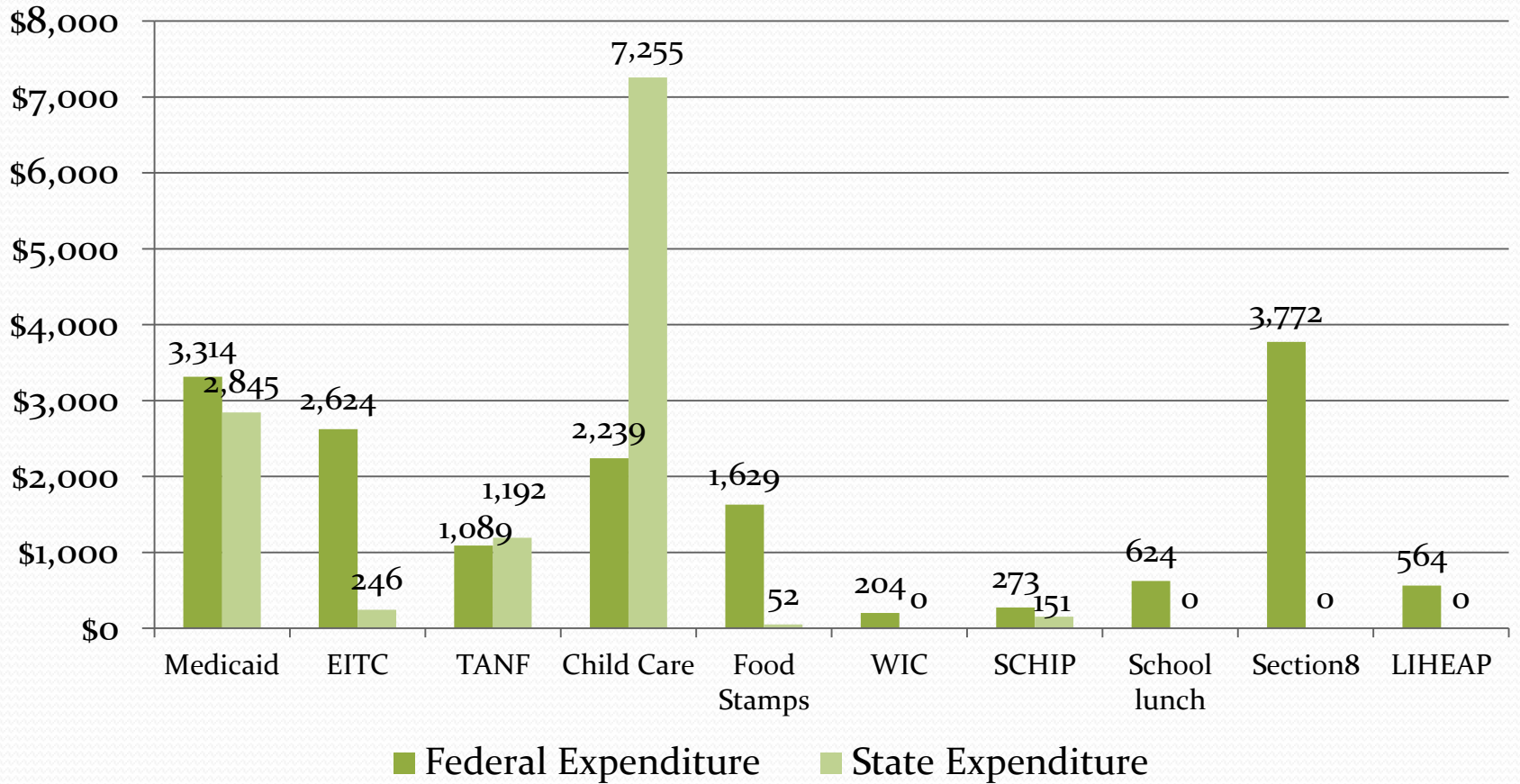
Data source

- Administrative data from each program.
 - Advantage: official information about government spending and enrollments.
 - Limitation: It does not provide information about demographic, economic, and income characteristics of the recipients which are required to estimate the expenditure effect of minimum wage increase.
- Current Population Survey (CPS) March Supplement from U.S. Census
 - Advantage: Demographic, industry, economic, and income characteristics of the recipients.
 - Limitation: Less reliable information about enrollment and government spending on each program.

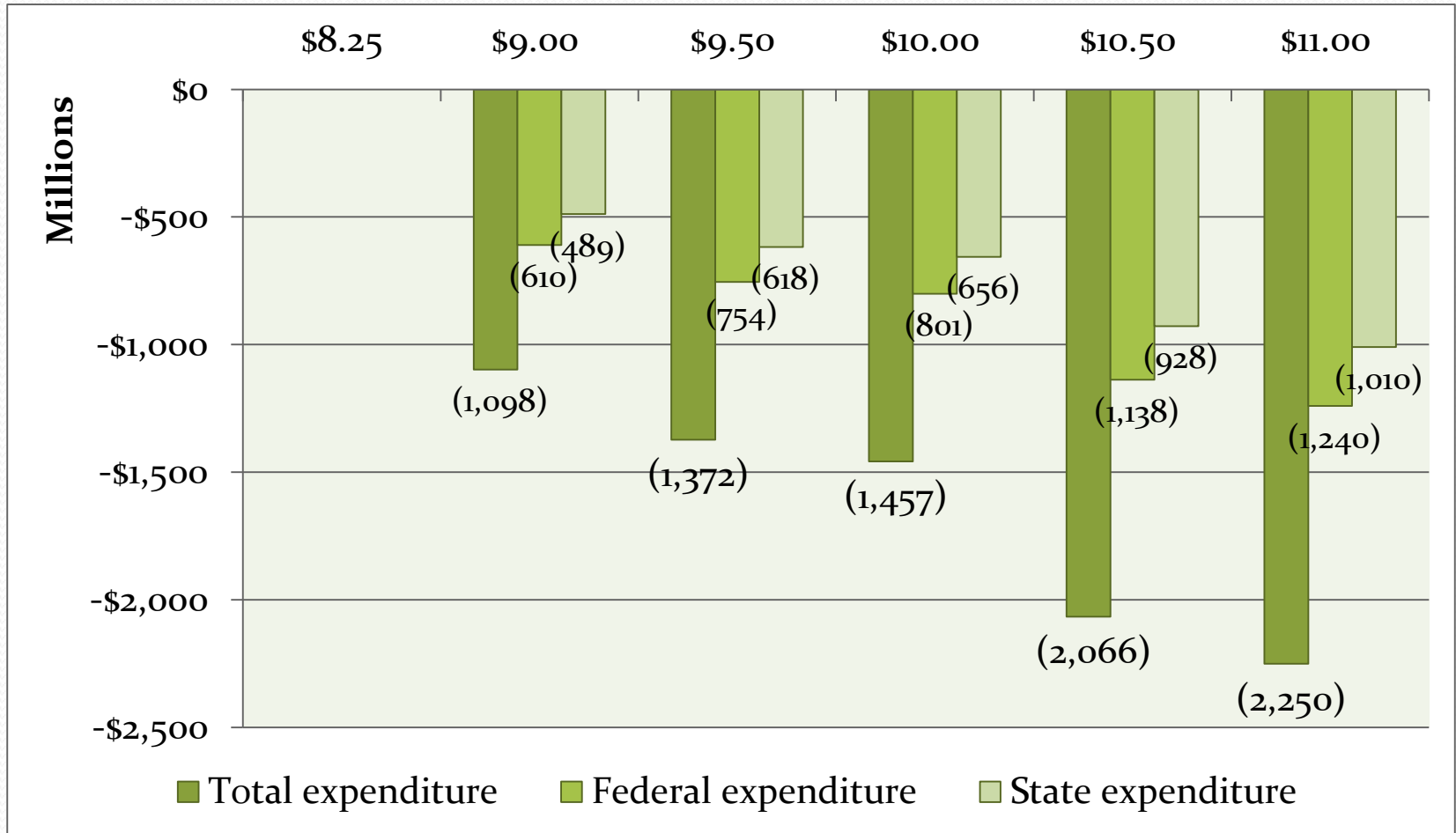
People receiving public assistance in Illinois, 2014



Average cost per beneficiary of public assistance in Illinois, by program, 2014



Predicted change in public assistance expenditure



* Estimated using the average value of benefit in administrative data

Dynamic Fiscal implications from REMI

- **The positive effect on personal consumption -due to increased personal income- leads to an increase in Sales Tax revenue.**
- **The positive effect on total wages more than compensates for the loss in employment. The result is an increase in Individual Income Tax revenue.**

Positive effect on main Revenue sources: IIT and ST

Minimum wage Oct 2017.rwb

Regional Simulation 1 compared to Standard Regional Control - Difference

Region = Illinois

Tax-PI Illinois v1.7.106 (Build 4117)

Category	Units	2017	2018	2019	2020	2025	2030
Total Wages and Salaries	Billions of Current Dollars	0.33116	0.54192	0.59710	0.67677	1.67263	3.85878
Individual Income Tax	Millions of Current Dollars	16.4	26.8	29.6	33.5	82.8	191.0
Personal Consumption Expenditures	Billions of Fixed (2009) Dollars	0.23905	0.37054	0.39023	0.43186	0.95429	1.95634
Sales Tax	Millions of Current Dollars	3.6	5.6	5.9	6.5	14.3	29.3

Next Steps:

- Stress test the unemployment insurance trust fund.
- Do analysis of wage pressure on workers above the current and proposed minimum wage.