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The Economic Impact of H.R. 932 and Mandatory Paid Sick Leave on U.S. Small Businesses

This report analyzes the potential economic impact of H.R. 932, also known as the Healthy Families Act, on U.S. employers, workers, and economy. H.R. 932 would establish a minimum time-off standard for paid sick leave by requiring employers with 15 or more employees to provide workers with up to 56 hours of paid leave during each year. Paid sick time could be used to tend to an injury or medical condition, care for family members, or, in the event an employee or family member is a victim of domestic violence, to seek medical attention, assist the victim, seek relocation, or take legal action. The mandate covers both full-time and part-time employees.

To estimate the economic impact of H.R. 932, the NFIB Business Size Insight Module (BSIM), a dynamic, multi-region model based on the Regional Economic Models, Inc. (REMI) structural economic forecasting and policy analysis model which integrates input-output, computable general equilibrium, econometric, and economic geography methodologies.[i] The underlying mechanics of the REMI model are based on decades of peer-reviewed literature.[ii] The model is used by numerous clients in both the private and public sectors.[iii] By comparing simulation results for scenarios which include proposed or yet-to-be-implemented policy changes with the model's baseline forecast, the REMI model is able to obtain estimates of how these policy changes might impact businesses and their workers. Unique among large-scale econometric forecasting models, the BSIM has the ability to forecast the economic impact of public policy and proposed legislation on different categories of U.S. businesses differentiated by employee-size-of-firm.

The paid sick leave mandate outlined in H.R. 932 would impose new costs on U.S. employers that would lead to reduced profitability, lost sales and production, and lost jobs. Assuming passage and implementation of H.R. 932 in 2016, the BSIM forecasts that the paid sick leave mandate could result in 430,000 jobs lost over a ten-year period spanning 2016 to 2025. The cumulative real output lost during this period is estimated to be $652 billion. Job losses at small firms would account for 58 percent of all jobs lost, and small firms would bear 50 percent of lost output.

Description of New Employer Costs Generated by the Healthy Families Act
H.R. 932 would establish a minimum time-off standard for paid sick leave by requiring employers with 15 or more employees to provide workers with up to 56 hours of paid leave during each year. This mandate would impose three major costs on employers: compensation costs associated with paying more workers taking paid time off, lost production due to more workers taking leave, and paperwork and recordkeeping costs incurred by complying with a new employer mandate. These three costs, and our attempts to model them, are discussed in detail below.

A. Employee Compensation
A major cost to employers from this legislation is a "compensation cost" in the form of compensation (both wages and benefits) transferred from employers to employees during their additional paid time off. H.R. 932 would require employers at firms with 15 or more employees to allow workers to accrue up to 56 hours of earned paid sick time at a given time. Paid sick time could be used to tend to an injury or medical condition, care for family members, or, in the event an employee or family member is a victim of domestic violence, to seek medical attention, assist the victim, seek relocation, or take legal action. The mandate covers both full-time and part-time employees. Workers would be entitled to begin earning paid sick time at the commencement of their employment and could use it starting on their 60th day of employment.

The size of employer compensation costs will depend on the amount of additional paid time off that employees take, either for sick leave or to deal with the impact of domestic violence in their lives. This study assumes that employees with newfound access to paid sick leave will take an average of five paid sick days per year, or roughly 65 percent of their newly available paid sick leave time.[iv] Workers already with access to paid sick leave are assumed to not change the amount of paid leave they take after H.R. 932 is implemented due to having to tend to injuries, medical conditions, or caring for family members. The paid sick leave these workers have access to is also assumed to be sufficiently generous that it satisfies the requirements of H.R. 932.

Compensation costs were estimated using data and assumptions regarding [1] the number of U.S. employees newly eligible for paid sick leave under H.R. 932, [2] the quantity of additional paid sick leave taken by employees if H.R. 932 passes, and [3] the compensation of these employees. To estimate [1], industry-level estimates of the percentage of workers without paid sick leave were multiplied by the number of workers in those industries. This calculation produces an estimate of the number of employees with no paid sick days—the set of employees newly eligible for paid sick leave if H.R. 932 were implemented. The percent estimates of workers ineligible for paid sick leave are provided by the U.S. Bureau of Labor Statistics and the Department of Agriculture. Industry-level data on the number of private sector employees were obtained from the Census Bureau. For illustrative purposes, estimates for the number of Ohio employees without paid sick days are presented below in **Table 1**, by industry (right-most column).[v]

Table 1: Estimated Number of OH Employees without Paid Sick Days, by Industry

NAICS Industry Code	Private Sector Industry	Percent of Workers without Paid Sick Days Nationally[vi]	Number of OH Employees, by Industry[vii]	Estimated Number of OH Employees without Paid Sick Days, by Industry
11	Agriculture	62	1,528	947
21	Mining	62	9,638	5,976
22	Utilities	9	20,954	1,886
23	Construction	58	166,386	96,504
31-33	Manufacturing	35	630,548	220,692
42	Wholesale Trade	26	222,657	57,891
44-45	Retail Trade	53	563,224	298,509
48-49	Transportation/Warehousing	27	156,145	42,159
51	Information	9	87,588	7,883
52	Finance and Insurance	10	245,098	24,510
53	Real Estate	26	61,541	16,001
54	Prof., Scientific, & Tech. Services	22	233,161	51,295
55	Management	12	155,904	18,708
56	Admin., Support, Waste Man., & Rem. Services	56	361,437	202,405
61	Education	25	118,323	29,581
62	Healthcare and Social Assist.	26	809,204	210,393
71	Arts, Entertainment, & Recreation	65	61,057	39,632
72	Accommodation and Food Services	76	437,761	332,698
81	Other Services	46	201,895	92,872
--	All Industries	48	4,544,049	1,750,541

The BSIM has the unique ability among forecasting models to generate results for specific firm-size categories. This ability allows for a finer analysis of policy impacts on small firms than other forecasting tools allow. Generating firm-size-specific outputs requires that inputs also be firm-size-specific. In practice, this means that to obtain firm-size-specific results for Ohio, the estimates of OH employees without paid sick leave in Table 1 need to be allocated to a pre-defined set of firm-size categories. This allocation of OH employees is described below as an example, as are subsequent steps needed to obtain the final inputs for the state. Identical processes were followed to obtain final inputs for other regions (using data specific to those regions), but these calculations are not shown.

The distribution of the estimated number of OH employees currently ineligible for paid sick leave across firm-size categories was done according to the present firm-size distribution of all OH employees. The case of the construction industry is provided as an example. According to Table 1, an estimated 166,386 OH construction employees are ineligible for paid sick leave. **Table 2.A** gives Census Bureau data on the distribution of OH employees working construction across firm-size groups. Multiplying the estimated number of OH construction workers without paid sick leave, 166,386, by the percentage shares for the firm-size categories in Table 2.A yields an estimated distribution of

construction employees without paid sick leave across firm-size categories (**Table 2.B**). This process was repeated for most 2-digit NAICS industry categories to obtain a matrix of estimated OH employees without paid sick leave by firm-size category and major industry (**Table 2.C**), completing the estimation of [1].

Table 2.A: Distribution of OH Construction Employees, 2012

	All Construction Employees	No. of Employees per Firm					
		1-4	**5-9**	**10-19**	**20-99**	**100-499**	**500+**
No. of Employees	166,386	20,378	21,204	24,818	47,878	15,659	26,449
% of Employees	100.0%	12.2%	12.7%	14.9%	28.8%	15.4%	15.9%

Source: Census Bureau, Statistics of U.S. Businesses

Table 2.B: Estimated Distribution of OH Construction Employees without Paid Sick Leave

	All Construction Employees without Paid Sick Leave	No. of Employees per Firm					
		1-4	**5-9**	**10-19**	**20-99**	**100-499**	**500+**
No. of Employees	96,504	11,819	12,298	14,394	27,769	14,882	15,340
% of Employees	100.00%	7.5%	8.9%	12.1%	31.6%	22.8%	17.0%

Table 2.C: Estimated Number of OH Employees without Paid Sick Leave, by Firm Size and Industry

	No. of Employees per Firm					
Industry	**1-4**	**5-9**	**10-19**	**20-99**	**100-499**	**500+**
Agriculture	192	109	109	244	186	109
Mining	334	461	574	926	983	2,699
Utilities	8	16	19	163	105	1,575
Construction	11,819	12,298	14,394	27,769	14,882	15,340
Manufacturing	2,917	5,534	9,562	39,025	45,909	117,745
Wholesale Trade	2,366	3,159	4,807	12,847	11,382	23,330
Retail Trade	11,868	15,642	16,269	34,406	20,766	199,557
Transportation/Warehousing	1,297	1,401	2,259	5,543	4,348	27,312
Information	109	146	237	791	760	5,840
Finance and Insurance	1,035	765	630	1,922	1,558	18,599
Real Estate	2,032	1,471	1,442	2,610	2,489	5,957
Prof., Scientific, & Tech. Services	5,113	4,608	5,491	10,270	8,263	17,550
Management	13	12	28	321	1,486	16,849
Admin., Support, Waste Man., & Rem. Services	5,426	6,334	8,398	21,810	30,143	130,294
Education	451	746	1,205	5,958	4,873	16,348
Healthcare and Social Assistance	4,285	8,493	10,707	28,981	39,441	118,487
Arts, Entertainment., & Recreation	1,857	2,363	3,801	11,474	8,518	11,619
Accommodation and Food Services	7,548	16,990	34,100	94,476	44,990	134,595
Other Services	13,461	17,078	16,138	24,809	9,888	11,499

Regarding [2], the quantity of additional paid leave taken under H.R. 932 will be the sum of additional time off taken by newly eligible workers either for traditional family and medical leave reasons or to deal with the impact of domestic violence in their lives. As was mentioned earlier, for the former set, it is assumed that newly eligible employees will each year use approximately 65 percent of the maximum amount of paid sick time they can accrue each year under H.R. 932, or 5.2 days per year, for traditional family and medical leave reasons. This assumption is based on statistics provided by the Institute for Women's Policy Research (IWPR).

The assumed quantity of paid time off that would be taken by the second set of workers—those taking time off to deal with domestic violence—is based on statistics from the Justice Department's most recent statistics on criminal victimization. According to the 2013 National Crime Victimization Survey, published DOJ's Bureau of Justice Statistics, the rate intimate partner violence (which includes victimizations committed by current or former spouses, boyfriends, or girlfriends) averaged approximately 2.8 in both 2012 and 2013.[viii] The rate of domestic violence, which includes both crimes committed by intimate partners as well as other family members, averaged approximately four percent in 2012 and 2013. According to the Justice Department, from 2003 to 2012, the rate of intimate partner violence for women was 6.2 for women and 1.4 for men. Using these figures as a benchmark, for modeling purposes, one might reasonably assume that 0.3 percent of workers suffer from domestic violence each year. Given the gravity of domestic violence cases, one might also reasonably assume that workers who are victims of domestic violence will avail themselves of a meaningful amount of any available paid leave time to seek medical attention, ensure their personal safety, or take legal action. It would therefore be reasonable to expect that workers covered by H.R. 932 who are victims of domestic violence to take the maximum amount of paid time off from work each year (56 hours). While this is a reasonable assumption, the practical effect of this assumption on BSIM inputs and outputs will be negligible due to the very small portion of the private sector workforce that would comprise this subpopulation. For simplicity, additional paid leave taken by newly eligible workers for reasons of domestic violence are left out of the model, the net effect being that any forecast employment or output losses will be more conservative than if this additional paid time off were accounted for in the model.

Estimates for [3], employee compensation, were derived using industry-level data on the average workweek lengths of employees and average hourly earnings[ix] or wages of employees. Data on average workweek lengths of employees are from the Bureau of Labor Statistics' Current Employment Statistics database, as are data on average hourly earnings for non-agricultural employees. For agricultural employees, wage data from the Department of Agriculture's National Agricultural Statistics Service were used. The BLS and DOA workweek length and earnings/wage data are given in columns (A) and (B) in **Table 3**. The average hourly earnings/wages per worker data in Column (B) are adjusted for overtime compensation.[x] The values in column (C) are the estimated earnings/wage cost per employee per year given the values in column (B), obtained by multiplying the respective hourly earnings/wage rates for regular pay by the average number of hours worked per day, multiplied accordingly by 5.2 days.

Table 3: Estimated Earnings, Wages, and Hours Worked by OH Employees, by Industry[xi]

Industry	Avg. # Hrs. Worked per Week (A)	Avg. Hourly Earnings/Wages (B)	Earnings/Wages per Employee for 5.2 Days Worked (C)
Agriculture	42.3	$10.12	$409.75
Mining	45.1	$31.34	$1,233.97
Utilities	34.5	$20.64	$740.56
Construction	38.8	$26.13	$1,054.40
Manufacturing	41.4	$24.32	$994.89
Wholesale Trade	38.9	$28.09	$1,136.41
Retail Trade	31.3	$17.00	$553.38
Transportation/ Warehousing	34.5	$20.64	$740.56
Information	36.8	$34.01	$1,301.63
Finance and Insurance	37.0	$27.20	$1,046.66
Real Estate	34.6	$24.07	$866.13
Prof., Scientific, & Tech. Services	34.9	$25.03	$908.49
Management	38.5	$36.64	$1,467.07
Admin., Support, Waste Man., & Rem. Services	34.6	$18.73	$673.98
Education	31.1	$21.99	$711.24
Healthcare and Social Assistance	31.1	$21.99	$711.24
Arts, Entertainment, & Recreation	23.8	$12.49	$309.15
Accommodation and Food Services	23.8	$12.49	$309.15
Other Services	30.0	$19.56	$610.27

As mentioned earlier, the BSIM requires inputs to be provided for individual firm-size categories. This was achieved by multiplying earnings/wage costs by the industry-by-firm-size matrix of estimated numbers of employees without paid sick leave. The end result is an industry-by-firm-size matrix of new compensation costs to employers for providing paid sick leave under H.R. 932 (**Table 4**). These compensation costs are based on the latest data available and are assumed to apply for the year 2015. Recall that under H.R. 932, firms with fewer than 15 employees are exempt, which is why compensation costs for firms with one to four, or five to nine employees, are zero.

Table 4: Estimated Earnings and Wages Paid by Firms to OH Employees Newly Eligible for Paid Sick Leave, Five Days of Paid Sick Leave Taken, Year 2015

Industry	No. of Employees per Firm					
	1-4	5-9	10-19	20-99	100-499	500+
Agriculture	$0	$0	$13,480	$71,314	$54,438	$31,937
Mining	$0	$0	$214,579	$815,886	$866,162	$2,378,802
Utilities	$0	$0	$4,264	$86,313	$55,558	$833,134
Construction	$0	$0	$4,602,014	$20,914,160	$11,208,414	$11,553,503
Manufacturing	$0	$0	$2,884,408	$27,732,564	$32,624,439	$83,673,747
Wholesale Trade	$0	$0	$1,656,329	$10,428,063	$9,238,811	$18,937,705
Retail Trade	$0	$0	$2,729,902	$13,599,811	$8,208,448	$78,879,826
Transportation/ Warehousing	$0	$0	$507,215	$2,931,869	$2,300,020	$14,447,536
Information	$0	$0	$93,561	$735,012	$706,646	$5,429,585
Finance and Insurance	$0	$0	$200,064	$1,437,208	$1,164,928	$13,904,750
Real Estate	$0	$0	$378,625	$1,614,488	$1,539,852	$3,685,639
Prof., Scientific, & Tech. Services	$0	$0	$1,512,579	$6,664,584	$5,361,733	$11,388,453
Management	$0	$0	$12,331	$335,874	$1,557,143	$17,655,841
Admin., Support, Waste Man., & Rem. Services	$0	$0	$1,716,281	$10,499,805	$14,511,335	$62,725,192
Education	$0	$0	$259,923	$3,026,600	$2,475,639	$8,305,050
Healthcare and Social Assistance	$0	$0	$2,308,962	$14,723,088	$20,037,263	$60,195,137
Arts, Entertainment, & Recreation	$0	$0	$356,315	$2,533,756	$1,881,003	$2,565,720
Accommodation and Food Services	$0	$0	$3,196,478	$20,862,572	$9,934,774	$29,721,752
Other Services	$0	$0	$2,986,168	$10,814,334	$4,310,334	$5,012,548

The reader will note that the compensation figures given in Table 4 do not represent the total labor cost to employers generated by H.R. 932. Significant additional costs include employee benefits and payroll taxes paid by employers for employees newly taking sick leave. To estimate the true labor cost to employers, the figures in Table 4 must be adjusted to account for these factors.

The incorporation of employee benefits into the model was achieved by adjusting the compensation figures in Table 4 upward by a percentage based on the ratios of benefits and wages/salary to total compensation. The Bureau of Economic Analysis reports that in 2014, average compensation per private sector employee totaled $63,777. Of this figure, $51,710 was due to wage and salary accruals. The balance of $12,067 consists of non-cash benefits and other wage and salary supplements, including the employer's share of payroll taxes. In general, an employer's share of payroll taxes equals 7.65 percent of employee wages and salary. Of this 7.65 percent, 6.2 percentage points are intended to help fund old age, survivors, and disability insurance, and 1.45 percentage points go toward helping to pay for Medicare hospital insurance. Subtracting the employer's share of payroll taxes from the balance of $12,067 therefore yields an estimate of the share of employee

compensation represented by non-cash compensation, roughly 13.6 percent of total employee compensation.[xii]

This share is likely to vary by firm size, given the comparative ease with which large firms can provide non-cash benefits to their employees due to greater financial resources and cost savings achieved through greater purchasing power. In contrast, smaller firms are less able to afford non-cash benefits like health insurance for their workers. For this reason, the percentage share of employee compensation represented by benefits was assumed to vary with the number of workers per firm, with the percentage share represented by benefits being smaller at small firms and larger at large firms.[xiii] In accordance with this assumption, the cash compensation figures in Table 4 were adjusted upward to reflect the costs of non-cash employee compensation and payroll taxes to employers. The resulting adjusted compensation cost figures which include both cash and non-cash compensation are given in **Table 5**.

Table 5: Estimated Compensation Costs for OH Employers before Accounting for Income Tax, Five Days of Paid Sick Leave Taken, Year 2015

Industry	No. of Employees per Firm					
	1-4	5-9	10-19	20-99	100-499	500+
Agriculture	$0	$0	$14,978	$79,238	$64,045	$39,921
Mining	$0	$0	$238,422	$906,540	$1,019,014	$2,973,502
Utilities	$0	$0	$4,738	$95,903	$65,362	$1,041,417
Construction	$0	$0	$5,113,349	$23,237,956	$13,186,369	$14,441,879
Manufacturing	$0	$0	$3,204,897	$30,813,960	$38,381,693	$104,592,183
Wholesale Trade	$0	$0	$1,840,366	$11,586,736	$10,869,189	$23,672,131
Retail Trade	$0	$0	$3,033,224	$15,110,901	$9,656,997	$98,599,782
Transportation/ Warehousing	$0	$0	$563,573	$3,257,632	$2,705,906	$18,059,420
Information	$0	$0	$103,957	$816,680	$831,348	$6,786,981
Finance and Insurance	$0	$0	$222,293	$1,596,898	$1,370,504	$17,380,938
Real Estate	$0	$0	$420,694	$1,793,875	$1,811,590	$4,607,049
Prof., Scientific, & Tech. Services	$0	$0	$1,680,644	$7,405,093	$6,307,921	$14,235,567
Management	$0	$0	$13,701	$373,194	$1,831,933	$22,069,801
Admin., Support, Waste Man., & Rem. Services	$0	$0	$1,906,978	$11,666,450	$17,072,159	$78,406,490
Education	$0	$0	$288,803	$3,362,888	$2,912,517	$10,381,313
Healthcare and Social Assistance	$0	$0	$2,565,513	$16,358,986	$23,573,251	$75,243,921
Arts, Entertainment, & Recreation	$0	$0	$395,906	$2,815,285	$2,212,944	$3,207,151
Accommodation and Food Services	$0	$0	$3,551,642	$23,180,636	$11,687,969	$37,152,190
Other Services	$0	$0	$3,317,965	$12,015,926	$5,070,981	$6,265,684

The figures in Table 5 are estimates of what employers could expect to pay employees newly taking paid sick leave in the absence of tax distortions caused by the income tax code. They are not accurate estimates under current income tax law, however, which permits employers to deduct the value of certain benefits, like their share of employee health insurance premiums, when calculating income tax liability. This feature of tax law was accounted for in the model by assuming that employers of all sizes (a) pay

an income tax rate of 35 percent, (b) have sufficient earnings to deduct the maximum share possible of their contributions toward employee benefits, and (c) actually do deduct the maximum value. To incorporate these features of tax law into the model, the compensation figures in Table 5 were first reduced by an amount equal to 35 percent of the corresponding estimates of non-cash employee benefits. The resulting compensation cost figures are given in **Table 6**. The estimated total compensation cost (accounting for all tax distortions) to employer firms in 2015 due to a federal paid sick leave mandate is $880 million.

Table 6: Estimated Compensation Costs for OH Employers after Accounting for Income Tax, Five Days of Paid Sick Leave Taken, Year 2015

Industry	No. of Employees per Firm					
	1-4	5-9	10-19	20-99	100-499	500+
Agriculture	$0	$0	$14,815	$78,374	$62,140	$37,982
Mining	$0	$0	$235,822	$896,656	$988,707	$2,829,050
Utilities	$0	$0	$4,686	$94,857	$63,419	$990,825
Construction	$0	$0	$5,057,600	$22,984,604	$12,794,190	$13,740,293
Manufacturing	$0	$0	$3,169,956	$30,478,011	$37,240,173	$99,511,095
Wholesale Trade	$0	$0	$1,820,301	$11,460,412	$10,545,926	$22,522,139
Retail Trade	$0	$0	$3,000,155	$14,946,155	$9,369,786	$93,809,805
Transportation/ Warehousing	$0	$0	$557,428	$3,222,115	$2,625,429	$17,182,094
Information	$0	$0	$102,823	$807,776	$806,623	$6,457,270
Finance and Insurance	$0	$0	$219,870	$1,579,488	$1,329,743	$16,536,572
Real Estate	$0	$0	$416,108	$1,774,318	$1,757,711	$4,383,238
Prof., Scientific, & Tech. Services	$0	$0	$1,662,320	$7,324,359	$6,120,315	$13,544,003
Management	$0	$0	$13,552	$369,125	$1,777,449	$20,997,650
Admin., Support, Waste Man., & Rem. Services	$0	$0	$1,886,188	$11,539,256	$16,564,412	$74,597,502
Education	$0	$0	$285,655	$3,326,225	$2,825,895	$9,876,989
Healthcare and Social Assistance	$0	$0	$2,537,543	$16,180,632	$22,872,153	$71,588,571
Arts, Entertainment, & Recreation	$0	$0	$391,589	$2,784,591	$2,147,129	$3,051,347
Accommodation and Food Services	$0	$0	$3,512,920	$22,927,909	$11,340,355	$35,347,336
Other Services	$0	$0	$3,281,791	$11,884,923	$4,920,164	$5,961,297

The compensation cost estimates in Table 6 are based on the latest data available, and we assume them to be the costs employers will pay in 2015. Given inflation, these costs can be expected to be higher in 2016 and beyond. To account for inflation, the model assumes that employee compensation costs increase annually between 2016 and 2025 at their historical rate of growth during the previous decade. Data from the Bureau of Economic Analysis indicate that the average annual percentage change for nominal full-time private sector employee compensation between 2005 and 2014 was 3.0 percent. This growth rate was applied to the figures in Table 6 to obtain estimated compensation costs for years 2016 through 2025 (not shown).

The figures in Table 6 and corresponding tables for years 2016 through 2025 represent the final estimated compensation costs to employers created by H.R. 932 in the medium term. It should be noted that these estimates rely upon a key assumption regarding

employer behavior, namely that no preemptive action is taken by employers in anticipation of the implementation of H.R. 932. According to the economic theory of rational expectations, rational agents will take actions in the present that optimize the value of expected present and future outcomes. When future expectations change, agents will adjust their behavior in the present accordingly. Hypothetically, it is possible that some employers will seek to offset some of the expected future costs generated by H.R. 932 by immediately lowering employee compensation, reducing the number of workers employed, or decreasing other business spending. No such effects were included in the modeling.

B. Lost Production Due to Absent Workers

The absence of workers from work causes employers to suffer lost production. Absent workers are unable to produce the goods and services that businesses sell. Given demand, this translates into lost sales which hurt business earnings and profit. A mandated paid sick leave policy will increase the number of work days missed by employees. The financial loss from this increase can be material and is an important consequence of the proposed legislation.

One should take care to note that the "cost" of lost production is separate and different from the compensation cost described earlier. With a paid sick leave mandate, workers are paid compensation whether they are present and healthy or absent and sick. The compensation costs accrue during occasions of worker absence. During these occasions of worker absence, the business is also not producing as many goods and services as it otherwise would. This should translate into lower revenue (and maybe profits) for the firm assuming that the market for the firm's products is not oversupplied and if prices are relatively constant.[xiv] In the real world, these two assumptions need not hold: sometimes there is too much product available for too little demand, and prices can and often do change. The impact of lost production on firm revenue and profitability is therefore less certain (insofar as modeling is concerned) than the cost of compensating an employee for a given period of time.

Despite the importance of this cost, exogenous production losses were not included in the BSIM forecast for technical reasons. First, there is a lack of available data necessary to estimate the magnitude and distribution of these production losses across industries. Labor productivity varies by industry, and labor productivity data only exist or are publicly available for select industries. Modeling and simulating the impact of an industry-neutral policy shock (such as the proposed paid sick leave mandate) using the BSIM, however, requires input for all major NAICS industry codes. Including production losses in the model would therefore require the estimation of labor productivity for industries with missing data values, creating a potentially large source of error. Second, the BSIM is not constructed to accept exogenous changes in production levels as input. Rather, the module is designed to receive input in the form of nominal costs to employers or employees, from which it subsequently computes forecasts for production, employment, and other macro variables.

These obstacles prevented the inclusion of exogenous production losses due to increased worker absences to the analysis. However, we should point out that if one

actually had a model capable of accepting such production losses and were capable of measuring them with a reasonable degree of accuracy, it is important to avoid double-counting in the sense that such a model might not also accept as input compensation costs like the ones described above in the same way that the BSIM does. The main point from the preceding discussion is that *to the extent that such production losses are absent from the model, any forecast job and output losses associated with the implementation of a federal paid sick leave mandate contained herein may be low*.

One final note concerning production effects due to a paid sick leave mandate: Some contend that a paid sick leave mandate will increase labor productivity among workers, the argument being that sick workers are less productive than healthy workers and spread their germs to co-workers, further reducing firm-wide productivity. While some research has suggested that improved health status among workers might lead to higher productivity growth, the results of other studies urge caution with regard to claims that better health outcomes lead to greater growth. The Congressional Budget Office's official position on this matter is one of agnosticism.[xv] Lacking a sufficient body of evidence to sway us from a state of uncertainty, we assume that a paid sick leave mandate would neither increase nor decrease labor productivity.

C. Paperwork and Recordkeeping Costs

The proposed mandate would also impose costs on employers in the form of additional paperwork and recordkeeping. Small business owners frequently handle such paperwork and recordkeeping themselves, allocating valuable time and energy to these administrative tasks that could be spent acquiring new customers, making business decisions, or otherwise operating and growing their businesses. According to a 2003 NFIB National Small Business Poll on paperwork and recordkeeping, 39.3 percent of small business owners/managers surveyed indicated that they personally handled their businesses' personnel paperwork and recordkeeping.[xvi] In that same survey, small business owners/managers responded that they felt $40 (approximately) was a fair per-hour amount to claim for the time and effort they spent doing paperwork and recordkeeping required by government.[xvii]

H.R. 932 requires employers to "make, keep, and preserve records pertaining to compliance with this Act in accordance with . . . the Fair Labor Standards Act . . . and in accordance with regulations prescribed by the Secretary [of Labor]." To account for this burden, an employer newly providing paid sick leave under H.R. 932 is assumed to face a new paperwork and recordkeeping cost of 10 person-hours per year. At $40 per hour, the paperwork and recordkeeping costs for employers newly offering paid sick leave translates to $400 per year per employer.

Effects of H.R. 932 on Private Sector Demand

Employees newly eligible for paid sick leave who use it can be expected to increase demand for healthcare-related goods and services. Employees may, for example, spend their paid sick leave time visiting the doctor's office, going to the dentist, or purchasing and taking medication for an illness. All these activities represent increases in the

consumption of healthcare-related goods and services. To account for this effect, it is assumed that demand for private sector healthcare goods and services produced in Ohio will increase by a dollar amount equal to the increase in OH employer costs

Increased demand for healthcare by OH employees is assumed to be distributed across industries according to historical patterns of healthcare expenditures. The assumed distribution is given in **Table 7** and was extrapolated from data on 2013 U.S. healthcare expenditures provided by the Centers for Medicare and Medicaid Services' National Health Expenditures Accounts. The pattern of healthcare expenditures is assumed to be static in the medium term, so new demand for healthcare is allocated according to the distribution in Table 7 for all forecast years (2016 through 2025).

Table 7: Assumed Distribution of New Healthcare Expenditures Generated by H.R. 932

Personal Health Care	47.79%
Hospital Care	18.14%
Physician and Clinical Services	11.36%
Prescription Drugs and Other Non-Durable Medical Products	5.25%
Durable Medical Products	5.25%
Nursing Home Care	3.02%
Other Health, Residential, and Personal Care	2.87%
Dental Services	2.15%
Other Professional Services	1.55%
Home Health Care	1.54%
Other Non-Durable medical Products	1.08%
Total:	**100.0%**

Source: Centers for Medicare and Medicaid Services

For illustrative purposes, the dollar values of the assumed increases in healthcare expenditures based on the distribution in Table 7 are given below in **Table 8** for year 2016. The estimated total cost to OH employers in 2016 for a full calendar year due to a federal paid sick leave mandate as stipulated in H.R. 932 is $880,021,139. Multiplying this sum by the percentages in Table 7 yields the dollar values in Table 8.

Table 8: Estimated New OH Healthcare Expenditures for 2016 in Response to H.R. 932

Personal Health Care	$420,579,673
Hospital Care	$159,621,282
Physician and Clinical Services	$99,957,099
Prescription Drugs and Other Non-Durable Medical Products	$46,187,778
Durable Medical Products	$46,187,778
Nursing Home Care	$26,543,917
Other Health, Residential, and Personal Care	$25,259,092
Dental Services	$18,911,263
Other Professional Services	$13,663,813
Home Health Care	$13,595,665

Other Non-Durable medical Products	$9,523,789
Total:	**$880,021,138**

Effects of H.R. 932 on Government Demand

H.R. 932 will create new responsibilities for government, which must administer and enforce the mandate. The Department of Labor is directed to investigate and attempt to resolve any complaints of violations of H.R. 932 and may pursue the recovery of damages in court on behalf of plaintiffs. Government tools for administrating and enforcing similar mandates already exist in the Department of Labor's Wage and Hour Division (WHD), which is responsible for ensuring compliance with the minimum standards for wages and working conditions in the United States. WHD is already responsible for administering and enforcing the Family and Medical Leave Act (FMLA), which entitles eligible employees of covered employers to take up to a total of twelve weeks of unpaid leave per year for health reasons or to care for a family member. Administration and enforcement of a new paid sick leave mandate could be achieved by expanding existing tools used to oversee the FMLA, making any new administrative costs to the government minor.

The bill also requires the collection of data on paid sick time by the government. The Bureau of Labor Statistics is ordered to compile annual statistics on the amount of paid and unpaid sick time available to employees by occupation and type of employment establishment and an estimate of the average sick time used by employees according to occupation and the type of employment establishment. Additionally, the Government Accountability Office is ordered to conduct a study not later than five years after implementation of the mandate investigating employees' access to paid sick time and other information. Existing data collection methods on paid leave in the form of the Bureau of Labor Statistics' National Compensation Survey suggests that any new costs associated with data collection on paid sick time by BLS will be negligible. As for potential new costs for GAO, the GAO already issues (usually) over 900 separate products (primarily reports) per year.[xviii] One can reasonable assume that the envisioned future GAO study on mandated paid sick leave will simply be one of the 900 or so reports issued in the fifth year after the mandate's implementation with a net additional cost of zero. But even if one were to assume that the GAO study would impose new net positive costs on the government, relative to the aggregate employer costs described above, any new government costs would be negligible.[xix] For simplicity then, no new government costs were included in the modeling.

Results: Forecast Economic Impact of H.R. 932

The BSIM results suggest that implementation of a federal paid sick leave mandate as stipulated in H.R. 932 could cause substantial job loss and output[xx] loss in the private sector. The BSIM forecasts that if H.R. 932 is implemented:

- Over 430,000 private sector jobs will be lost by 2020.

- U.S. real GDP will be $72.1 billion less in 2021 than if H.R. 932 had not been implemented.

- Cumulatively, $652 billion in real output will be lost between 2016 and 2025.

Employment

Detailed employment forecasts for the entire United States are given in **Table 9** and **Figure 1**. The forecasts are presented as employment <u>differences</u> relative to a baseline forecast. The baseline forecast represents the path of the economy if no policy shock occurs and H.R. 932 is not implemented. Negative values indicate job losses, and positive values represent job gains. According to the results, 291,000 private sector jobs are forecast to be lost in 2016, the year the paid sick leave mandate is assumed to first be implemented. Job losses increase annually until peaking in 2020, when employers are expected to employ 431,000 fewer workers than they otherwise would in the absence of the federal paid sick leave mandate. In out years, job losses decrease annually as the economy adjusts to the new costs imposed on employers. Still, in 2025—some ten years after the first year of implementation—the BSIM forecasts that U.S. firms will employ 389,000 fewer workers than they otherwise would have had H.R. 932 not been implemented.

Table 9: Forecast U.S. Nonfarm Private Sector Employment Difference from Baseline (Number of Employees)

		Year									
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Firm Size (No. of Employees per Firm)	1 to 4	-25,446	-28,913	-32,586	-33,578	-33,835	-33,352	-32,494	-31,566	-30,712	-29,819
	5 to 9	-23,820	-27,351	-31,081	-32,155	-32,397	-31,861	-30,920	-29,897	-28,950	-27,947
	10 to 19	-28,862	-33,265	-37,831	-39,209	-39,593	-39,035	-37,972	-36,785	-35,675	-34,494
	20 to 99	-68,047	-78,792	-89,850	-93,397	-94,677	-93,694	-91,505	-88,939	-86,472	-83,795
	100 to 499	-28,594	-36,823	-45,376	-48,962	-50,502	-50,320	-49,117	-47,557	-46,049	-44,290
	500+	-116,418	-136,488	-162,312	-173,647	-179,942	-181,220	-179,362	-176,180	-172,858	-168,447
	All Firms	**-291,187**	**-341,632**	**-399,036**	**-420,948**	**-430,946**	**-429,482**	**-421,370**	**-410,924**	**-400,716**	**-388,792**

U.S. Nonfarm Private Employment:
Forecast Difference from Baseline (in Number of Employees) Due to H.R. 932, 2016-2025
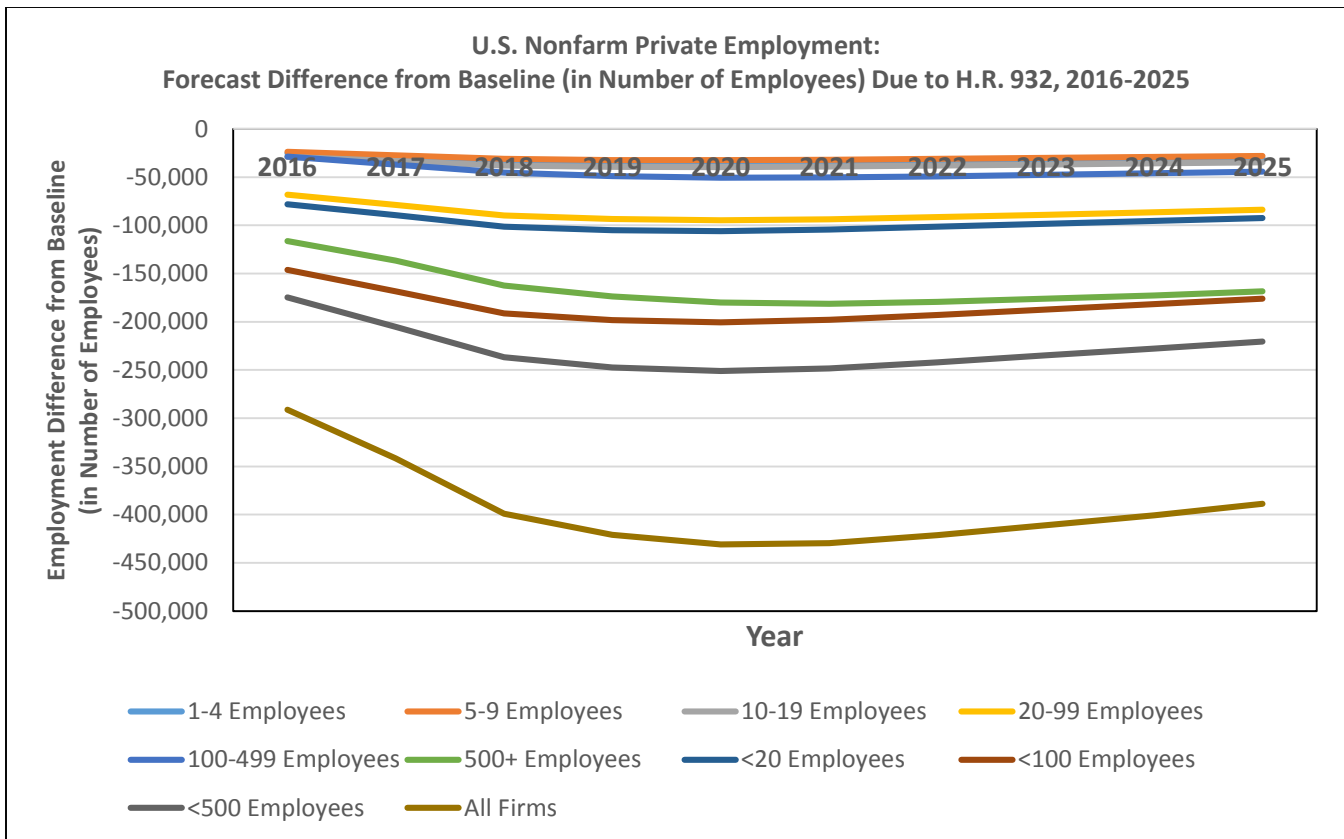
Figure 1

       The job losses forecast to occur at small firms are substantial.[xxi] By 2020, the year with the largest forecast employment difference from baseline, firms with fewer than 500 employees are forecast to have 251,000 fewer workers, approximately 58.2 percent of all jobs lost. Firms with fewer than 100 employees are forecast to employ nearly 201,000 fewer workers (46.1 percent), and 106,000 jobs (24.6 percent) will be lost at firms with fewer than 20 workers. **Table 10** and **Figure 2** give the relative share of all jobs lost for different employee-size-of-firm categories. Small businesses are forecast to bear between 56 percent and 60 percent of all job losses throughout the entire ten-year forecast window. In 2016, 60 percent of the employment gap (jobs lost) is forecast to be at firms with fewer than 500 employees; 50 percent is forecast to be at firms with fewer than 100 employees; and 27 percent is forecast to be at firms with fewer than 20 employees. The small business share of job losses does decrease over time as employers absorb the shock of the paid sick leave mandate, but only slightly. In 2025, at the end of the ten-year forecast window, job losses at firms with fewer than 500 employees still account for nearly 57 percent of all jobs lost; job losses at firms with fewer than 100 employees still account for 45 percent of all jobs lost; and job losses at firms with fewer than 20 employees account for almost 24 percent of all jobs lost.

Table 10: Small Business Share of Forecast Job Losses Due to H.R. 932, 2016-2025

		Year									
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Firm Size	< 20 Employees	26.8%	26.2%	25.4%	24.9%	24.6%	24.3%	24.1%	23.9%	23.8%	23.7%
	< 100 Employees	50.2%	49.3%	48.0%	47.1%	46.5%	46.1%	45.8%	45.6%	45.4%	45.3%
	< 500 Employees	60.0%	60.0%	59.3%	58.7%	58.2%	57.8%	57.4%	57.1%	56.9%	56.7%
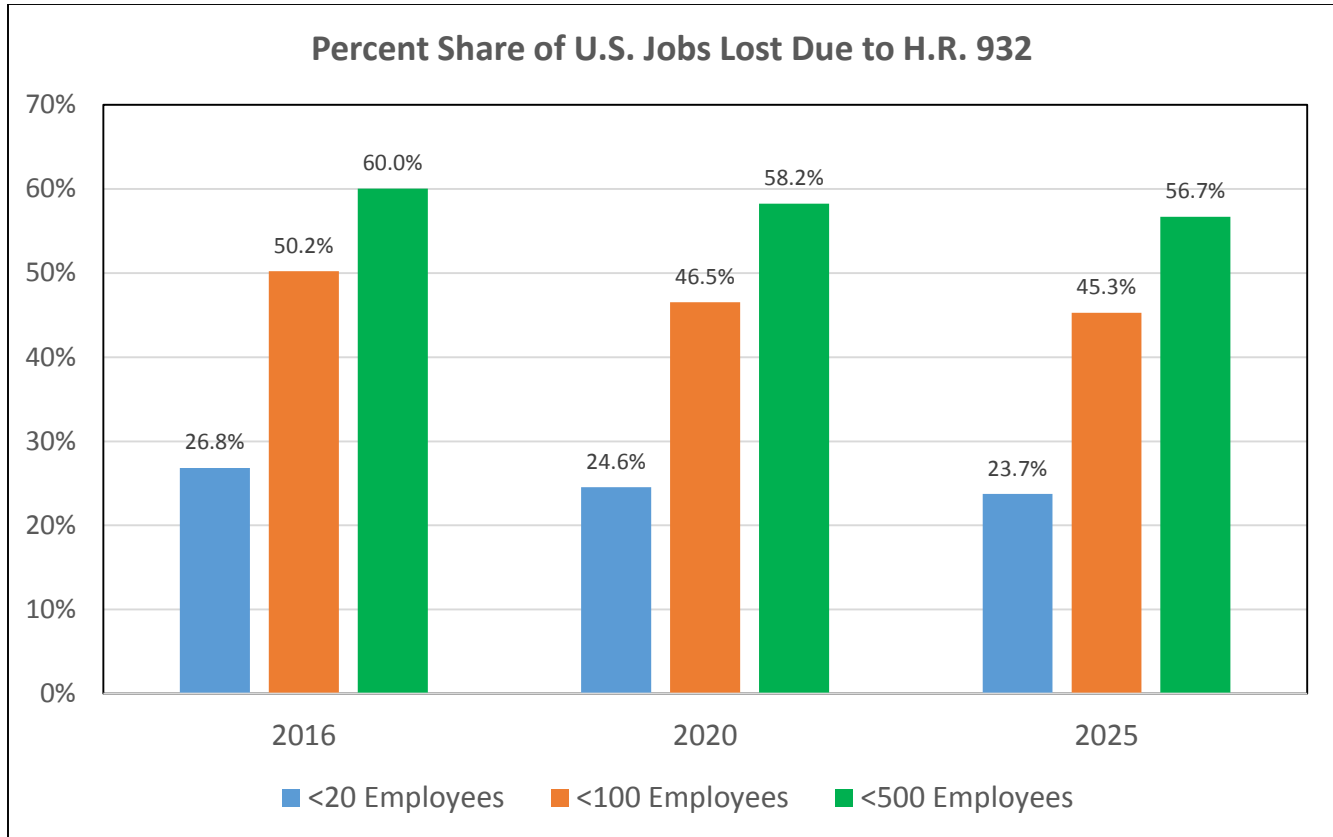
Figure 2

Dividing the percentage share of forecast job losses for a particular employee-size-of-firm category by that group's (historical) percentage share of private sector employment yields an index of employment change (**Figure 3**). This index serves as an indicator as to whether the job loss forecast for a particular employee-size-of-firm group is proportionate to the group's existing employment base. An index value of 100 indicates that an employee-size-of-firm group experiences job losses proportionate to the group's existing employment base. An index value higher than 100 indicates an employee-size-of-firm group that experiences a disproportionately high number of job losses relative to its current employment share (and vice versa for an index value lower than 100).

Small businesses clearly bear a disproportionately large amount of job losses generated by the mandate. The employment change index value for firms with one to four

employees in 2020, for example, is 154, the result of dividing the percentage share of jobs lost by firms with one to four employees (7.9 percent) by the percentage share of private sector employment currently represented by this firm-size category (5.1 percent). Other employee-size-of-firm categories with fewer than 100 employees also have disproportionately high index values. Firms with five to nine, ten to 19, and 20 to 99 employees have index values of 134, 134, and 131, respectively.

In contrast to firms with fewer than 500 employees, large firms bear a disproportionately small amount of the job losses generated by the mandate (when the share of private sector employment is used as the reference point). Firms with 500 or more employees have an index value of 81. The dichotomy separating index values of small firms and large firms highlights the comparatively high sensitivity of very small firms to regulatory costs. The variation in employment effects across different employee-size-of-firm groups is consistent with IWPR research analyzing possible negative effects on San Francisco workers due to that city's implementation of a paid sick leave ordinance in 2007. In a recent IWPR report detailing the results of a survey of private-sector employees of San Francisco firms, over 18 percent of respondents at firms with fewer than 25 workers indicated they had experienced layoffs or saw their total number of work hours reduced. In contrast, just 13 percent of workers at firms with 100 or more workers reported experiencing such events.[xxii]
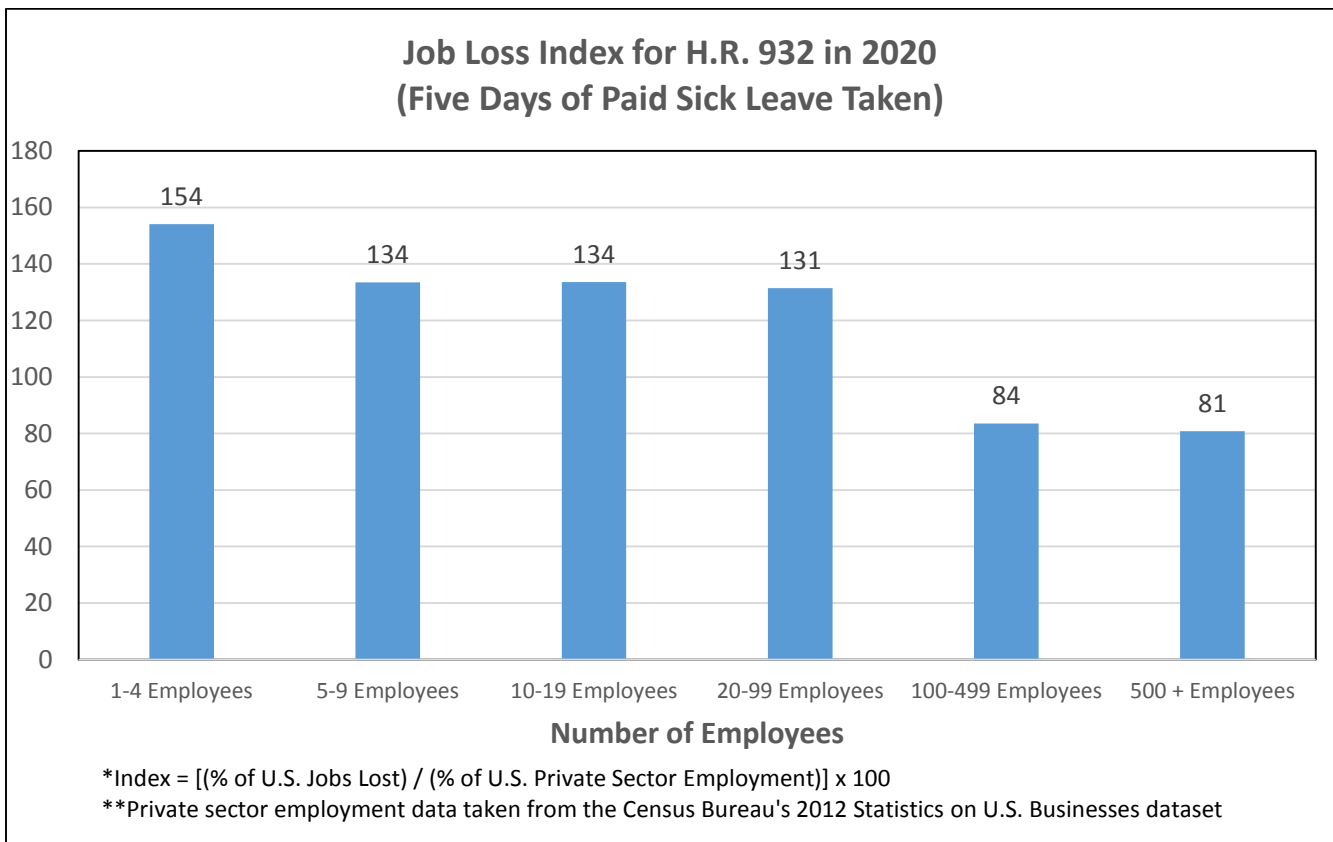

Job Loss Index for H.R. 932 in 2020
(Five Days of Paid Sick Leave Taken)

*Index = [(% of U.S. Jobs Lost) / (% of U.S. Private Sector Employment)] x 100
**Private sector employment data taken from the Census Bureau's 2012 Statistics on U.S. Businesses dataset

Figure 3

Output

Detailed forecasts for real output losses are given in **Table 11** and **Figure 4**. As with employment, the output forecasts are presented as differences relative to a baseline forecast representing the path of the economy if H.R. 932 is not implemented. The output gap is forecast to total approximately $42.4 billion in 2016 and is expected to grow in the medium term, peaking at approximately $72.1 billion in 2021. As with the employment gap, the output gap is also forecast to shrink in out years as the economy absorbs the costs of the paid sick leave mandate. However, in 2025 the output gap is still expected to total approximately $69.9 billion.

Table 11: Forecast U.S. Real Output Difference from Baseline (in Billions of 2009 $s)

|		Year									
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Firm Size (No. of Employees per Firm)	1 to 4	-$3.1B	-$3.6B	-$4.1B	-$4.3B	-$4.4B	-$4.3B	-$4.2B	-$4.0B	-$3.9B	-$3.8B
	5 to 9	-$2.5B	-$3.0B	-$3.6B	-$3.8B	-$3.9B	-$3.8B	-$3.7B	-$3.6B	-$3.5B	-$3.4B
	10 to 19	-$3.1B	-$3.8B	-$4.4B	-$4.7B	-$4.9B	-$4.9B	-$4.8B	-$4.7B	-$4.6B	-$4.4B
	20 to 99	-$8.1B	-$9.9B	-$11.8B	-$12.6B	-$13.1B	-$13.3B	-$13.2B	-$13.0B	-$12.8B	-$12.5B
	100 to 499	-$5.0B	-$6.5B	-$8.1B	-$9.0B	-$9.5B	-$9.7B	-$9.7B	-$9.6B	-$9.5B	-$9.4B
	500+	-$20.7B	-$25.0B	-$30.3B	-$33.2B	-$35.1B	-$36.2B	-$36.6B	-$36.6B	-$36.6B	-$36.4B
	All Firms	**-$42.4B**	**-$51.8B**	**-$62.4B**	**-$67.6B**	**-$70.9B**	**-$72.1B**	**-$72.1B**	**-$71.6B**	**-$70.9B**	**-$69.9B**
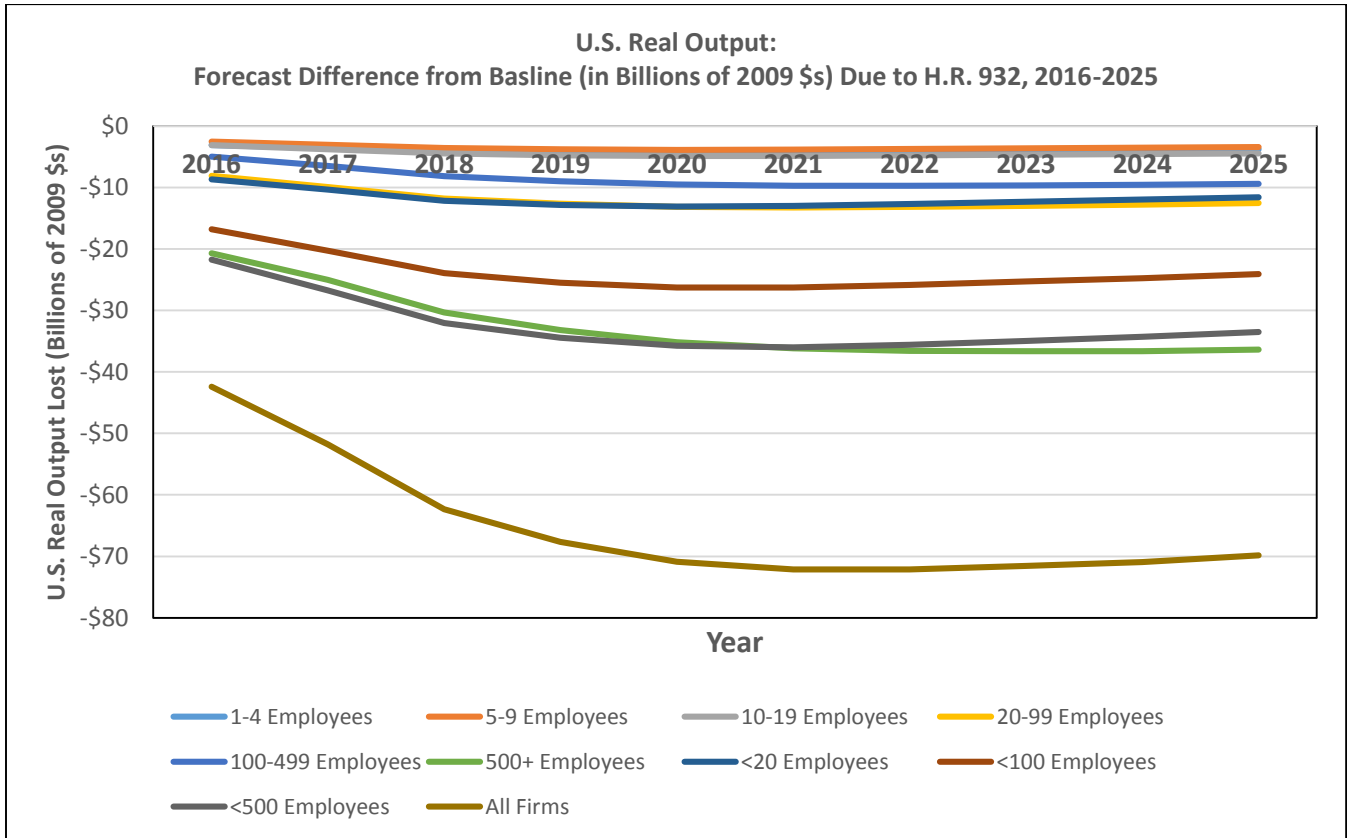
Figure 4

The small business share of these output reductions is given in **Table 12** and **Figure 5**. As with employment, small firms are forecast to bear a substantial share of output losses. In 2016, 51 percent of the decrease in output is forecast to occur at firms with fewer than 500 employees, 40 percent at firms with fewer than 100 employees, and 21 percent at firms with fewer than 20 employees—all this in spite of the exemption from the paid sick leave mandate for firms with fewer than 15 employees.

Table 12: Small Business Share of Forecast Output Gap Due to H.R. 932, 2016-2025

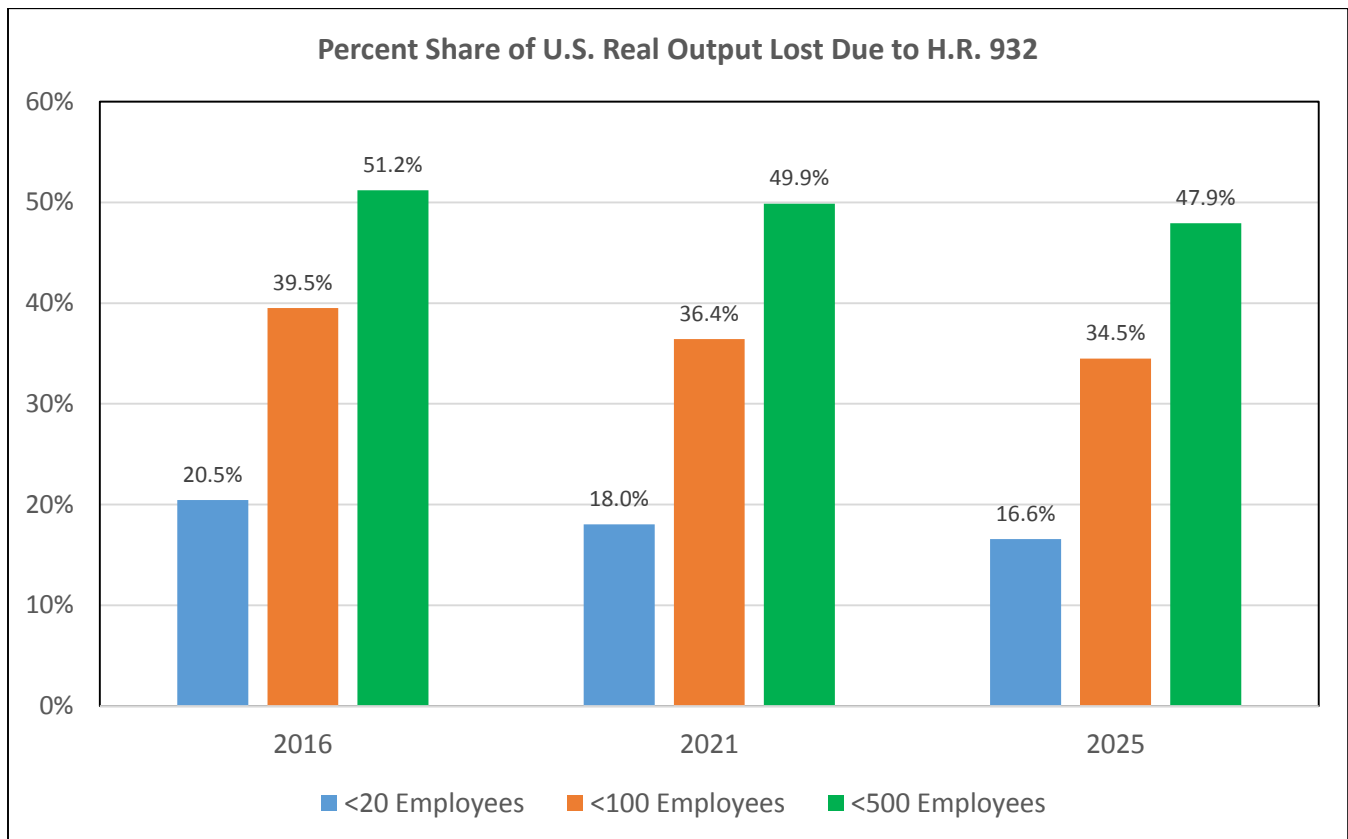|		Year									
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Firm Size	< 20 Employees	20.5%	20.0%	19.5%	19.0%	18.5%	18.0%	17.6%	17.2%	16.9%	16.6%
	< 100 Employees	39.5%	39.1%	38.4%	37.7%	37.0%	36.4%	35.8%	35.3%	34.9%	34.5%
	< 500 Employees	51.2%	51.7%	51.4%	50.9%	50.4%	49.9%	49.3%	48.8%	48.4%	47.9%

Figure 5

Table 13 gives estimates for the <u>cumulative</u> lost output for different employee-size-of-firm categories for the entire ten-year forecast window (2016 to 2025). In total, the BSIM forecasts that H.R. 932 will result in a net loss of $651.7 billion in real output during this ten-year period, with approximately half of that lost output—some $325 billion—occurring at small firms.

Table 13: Forecast Cumulative U.S. Real Output Lost by 2025 Due to H.R. 932 (in Billions of 2009 $s), Five Days of Paid Sick Leave Taken

Firm Size	Cumulative Real Output Lost by 2025
1 to 4 Employees	$39.6B
5 to 9 Employees	$34.9B
10 to 19 Employees	$44.2B
20 to 99 Employees	$120.3B
100 to 499 Employees	$86.1B
500 or More Employees	$326.7B
< 20 Employees per Firm	$118.7B
< 100 Employees per Firm	$238.9B
< 500 Employees per Firm	$325.0B
All Firms	**$651.7B**

Figure 6 presents an index of output change by firm size, constructed analagously to the index of employment change, except with cumulative output losses serving as the numerator and gross receipts (a proxy for output) as the denominator. Output losses are most disproportionate for firms with 10 to 19 employees. These firms will bear 6.8 percent of the cumulative output gap through 2025 but currently account for just 4.3 percent of national gross receipts, resulting in an index value of 157. Other small firms also bear a disproportionately large amount of real output losses. Firms with one to four, five to nine, and 20 to 99 employees have output change index values of 135, 151, and 153, respectively. As with changes in employment, large firms bear a disproportionately small amount of lost output. Firms with 500 or more employees have an output change index value of just 79.
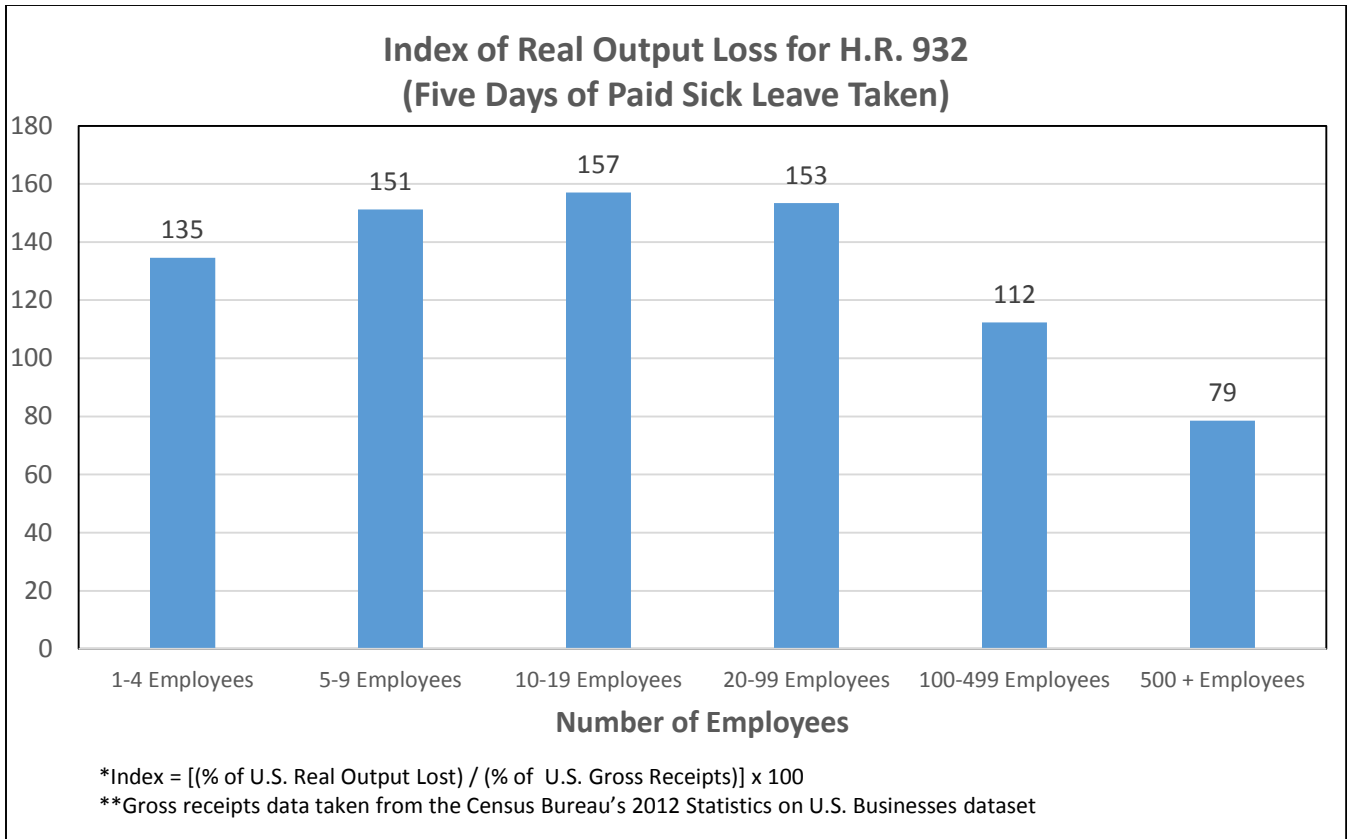
Index of Real Output Loss for H.R. 932
(Five Days of Paid Sick Leave Taken)

*Index = [(% of U.S. Real Output Lost) / (% of U.S. Gross Receipts)] x 100
**Gross receipts data taken from the Census Bureau's 2012 Statistics on U.S. Businesses dataset

Figure 6

Regional Results

Forecast results for each of the BSIM's 12 regions (11 states and a residual region representing the rest of the United States) are given in **Table 14**. The reader will note that despite existing state paid sick leave policies in certain states, the economies of these states will still be negatively impacted by the implementation of H.R. 932 vis-à-vis interstate transmission mechanisms. California, for example, began implementing a statewide paid sick leave mandate on all employers in July. Given that this state-level mandate has only just begun to be implemented, one might reasonably argue that only a fraction of the shock and negative effects to the economy from this mandate have been felt to date and that including California in the set of regions for which H.R. 932 would have a direct impact would have been justified. However, in an effort to be conservative in our estimates, we elected to leave California out of the set of regions. Nonetheless, California is still forecast to lose some jobs in the short and medium terms as a consequence of lower interstate commerce (*i.e.*, businesses and consumers in states which are directly impacted by H.R. 932 will purchase less goods and services from firms located in California than they otherwise would). Other states with state-level paid sick leave mandates include Connecticut, Massachusetts, and Oregon. The existence of all these mandates was accounted for in the modeling.

Table 14: Forecast Employment Gap and Real Output Gap for All Firms by Region, Select Years

Region	Employment Gap (Number of Employees)			Real Output Gap (Billions of 2009 $s)		
	2016	2020	2025	2016	2020	2025
California	-2,836	-1,518	314	-$6.3B	-$5.1B	-$1.9B
Colorado	-758	-1,110	-1,019	-$1.1B	-$1.9B	-$1.9B
Illinois	-13,223	-21,719	-21,859	-$2.0B	-$3.7B	-$4.0B
Kentucky	-3,356	-5,958	-6,312	-$0.5B	-$0.9B	-$1.0B
Massachusetts	-5,248	-754	4,323	-$0.9B	-$0.5B	-$0.2B
New Jersey	-3,330	-5,026	-5,354	-$0.6B	-$1.1B	-$1.2B
New York	-14,211	-21,039	-19,142	-$2.6B	-$4.0B	-$3.9B
Ohio	-6,802	-15,235	-16,489	-$1.3B	-$2.8B	-$3.1B
Pennsylvania	-7,893	-15,916	-16,455	-$1.1B	-$2.5B	-$2.8B
Virginia	-8,843	-14766	-13,397	-$1.1B	-$1.9B	-$1.8B
Washington	-9,536	-13,235	-12,319	-$1.3B	-$2.0B	-$2.0B
Rest of U.S.	-169,122	-282,791	-273,063	-$23.7B	-$44.5B	-$46.5B

Summary

The federal paid sick leave mandate proposed in H.R. 932 would impose new costs on employers in the forms of compensation costs associated with paying more workers taking paid leave, lost production due to absent workers, and new paperwork and recordkeeping costs associated with complying with the mandate. The NFIB Research Foundation used the Business Size Insight Module, a dynamic, multi-region model based on the Regional Economic Models, Inc. (REMI) structural economic forecasting and policy analysis model which integrates input-output, computable general equilibrium, econometric, and economic geography methodologies, to estimate the impact the federal paid sick leave mandate would have on the U.S. economy. Assuming implementation of H.R. 932 in 2016, the BSIM model forecasts that the federal paid sick leave mandate could result in 430,000 jobs lost over a ten-year period spanning 2016 to 2025. The cumulative real output lost during this period is estimated to be $652 billion. Job losses at small firms would account for 58 percent of all jobs lost, and small firms would bear 50 percent of lost output.

[i] The REMI model is used by a diverse group of clients spanning academia, private consulting firms, local and regional governments, and nonprofits, to name a few categories. A sample of clients includes the Massachusetts Institute of Technology, the AARP, the Urban Institute, and the Florida legislature.

[ii] A list of the peer-reviewed literature is available at http://www.remi.com/download/documentation/pi+/pi+_version_1.6/PI+_v1.6_Model_Equations.pdf. The list of references includes articles published in the American Economic Review and The Review of Economics and Statistics.

[iii] A list of clients that use the REMI model is available at http://www.remi.com/clients. The list includes consultancies like Boston Consulting Group and Ernst and Young, educational institutions like the Massachusetts Institute of Technology, nonprofit institutions like AARP and the Urban Institute, and federal, regional, and local government agencies.

[iv] This assumption is based on statistics provided by the Institute for Women's Policy Research (IWPR). According to IWPR, workers covered by paid sick days policies "miss an average of 3.9 days of work per year for their own illness and injury (excluding maternity leave)" and "need 1.3 days of paid sick time per year to care for family members" (on average). See Hartmann, Heidi I., "The Healthy Families Act: Impacts on Workers, Businesses, the Economy, and Public Health," Testimony before the U.S. Senate Committee on Health, Education, Labor, and Pensions, February 13, 2007.

[v] The use of Ohio as an example (instead of other regions in the model) is arbitrary. Identical data analysis and estimation methods were used for all other regions.

[vi] Except for agriculture, industry-level paid sick leave coverage rates are taken from the BLS March 2014 Employee Benefits Survey. The coverage rate for agricultural workers is taken from the BLS March 2014 National Compensation Survey.

[vii] Estimates of the number of OH employees by industry are taken from the Census Bureau's 2012 Statistics of U.S. Businesses dataset.

[viii] The victimization rate for a specified population over a certain time period is defined as the number of victimizations experienced by the specified population during the time period divided by the number of persons in the specified population, the quotient of which is then multiplied by 1,000.

[ix] Average hourly earnings reported by BLS reflect the actual return to a worker for a stated period and are different from wage rates, which are the amounts stipulated for given units of work or time. BLS earnings do not measure the level of total labor costs on the part of employers since they exclude items like benefits, irregular bonuses, retroactive items, and the employer's share of payroll taxes.

[x] For industries where the average workweek length exceeded 40 hours, non-overtime hourly earnings/wages were imputed for use in calculating compensation costs due to the paid sick leave mandate. Overtime pay was assumed to equal 1.5 times regular pay for the relevant industries. Non-overtime earnings/wages were estimated using the equation: Average Weekly Earnings/Wages = (40 Hours) x (Non-Overtime Earnings/Wage Rate) + (Avg. Workweek Length in Hours – 40) x (Overtime Earnings/Wage Rate).

[xi] With the exception of Agriculture, all dollar values in Table 3 represent or are derived from 2014 earnings data taken from the Bureau of Labor Statistics' Current Employment Statistics (CES) dataset. When available, state-specific earnings data was used. In the absence of state-specific earnings data, national-level data was used. No earnings data for agriculture was available, so 2014 wage data from the Department of Agriculture's National Agricultural Statistics Service was used instead.

[xii] The balance of $12,067 includes the employer's share of payroll taxes. Under current law, the employer's share of payroll taxes is 7.65 percent of employee wage and salary. On average, this amounts to 0.0765 x $51,710, or $3,956 per employee. Subtracting this figure from estimated wage and salary supplements yields $8,111, roughly 13.6 percent of reported per-employee compensation (not including the employer's share of payroll taxes).

Note that the subtraction of the employer's share of payroll taxes here is done solely to calculate the ratio of non-cash compensation received directly by employees to total compensation received directly by the employee. Payroll taxes are not ignored as an employer cost in this analysis and are introduced at a later stage of the modeling process.

[xiii] The ratio of non-cash compensation to overall compensation and employers' share of payroll taxes for all firms in a particular industry was adopted as the ratio for firms with 100 to 499 employees in that industry. For firms with fewer than 100 employees, this ratio less five percentage points was adopted. For firms with 500 or more employees, this ratio plus five percentage points was adopted.

[xiv] If supply outstrips demand, adding more goods and services to the market may not generate more revenue. Instead, the additional product might just sit on the shelf as unsold inventory.

[xv] When assessing potential productivity effects due to changes in the health insurance system during the national healthcare reform debate, the Congressional Budget Office issued a report part of which concerns evaluations of the claim that improved health status among workers increases economic output and productivity. The CBO performed a thorough literature review including studies that link healthier workers to higher wages and countries with better health outcomes to higher economic growth. The CBO questioned the direction of causation in these studies, noting, for example, that increased income may contribute to better health outcomes. Ultimately, the CBO concluded that "[b]ecause the impact on health outcomes from major changes to the health care system is uncertain, it is not clear whether such changes would have a substantial impact on overall economic output or productivity." See Congressional Budget Office, "Key Issues in Analyzing Major Health Insurance Proposals" (December 2008).

[xvi] See William J. Dennis, Jr., "Paperwork and Record-keeping," NFIB National Small Business Poll, Volume 3, Issue 5, 2003.

[xvii] The poll asked respondents whether they thought government should compensate them for dealing with the added paperwork and recordkeeping it required of their businesses. Respondents who answered "Yes" were then asked: "What do you think would be a fair per hour amount to claim for your time and efforts?" The average response was $43.30. Respondents who answered "No" were asked: "If the decision were made to reimburse you, what do you think would be a fair per hour amount to claim for your time and effort?" Their average response was $40.72.

[xviii] "About GAO Reports," U.S. Government Accountability Office, http://www.gao.gov/about/products/about-gao-reports.html.

[xix] The GAO reports that its budgetary resources for fiscal year 2014 were $534.6 million. Assuming the GAO issues 900 reports per year and that all GAO budgetary resources are allocated toward research, the average cost per GAO report is ($534.6 million / 900 reports) = $594,000 per report. Information on the GAO's budgetary resources are available in "GAO at a Glance," accessible at http://www.gao.gov/about/gglance.html.

[xx] The term "output" refers to the aggregate output of the U.S. economy (the country's gross domestic product (GDP)). GDP has three possible definitions: (1) the value of final goods and services produced in an economy during a given period (as opposed to raw materials or intermediate goods which are produced or sourced earlier in the production process), (2) the sum of value added during a given period, or (3) the sum of incomes in the economy during a given period. It is a technical term whose significance may be better understood by the reader if she considers that because of the first definition, output serves as a rough proxy for sales.

[xxi] This analysis adopts the Small Business Administration's size-of-business threshold of 500 employees to distinguish between small businesses and large businesses. The 500-employee threshold is frequently used by researchers to delineate the small business sector when working with firm-size data.

[xxii] Drago, Robert and Vicky Lovell, "San Francisco's Paid Sick Leave Ordinance: Outcomes for Employers and Employees," Institute for Women's Policy Research, February 2011.