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PUBLIC EMPLOYEE PENSIONS AND COLLECTIVE BARGAINING RIGHTS: EVIDENCE FROM STATE AND LOCAL GOVERNMENT FINANCES

*Brigham R. Frandsen**
*Michael Webb***

INTRODUCTION

State and local governments faced tremendous budget pressures in the wake of the financial crisis. Municipal bankruptcies—of which the city of Detroit's 2013 filing is the most dramatic example—spiked from 2009 to 2014, as Figure 1 shows.

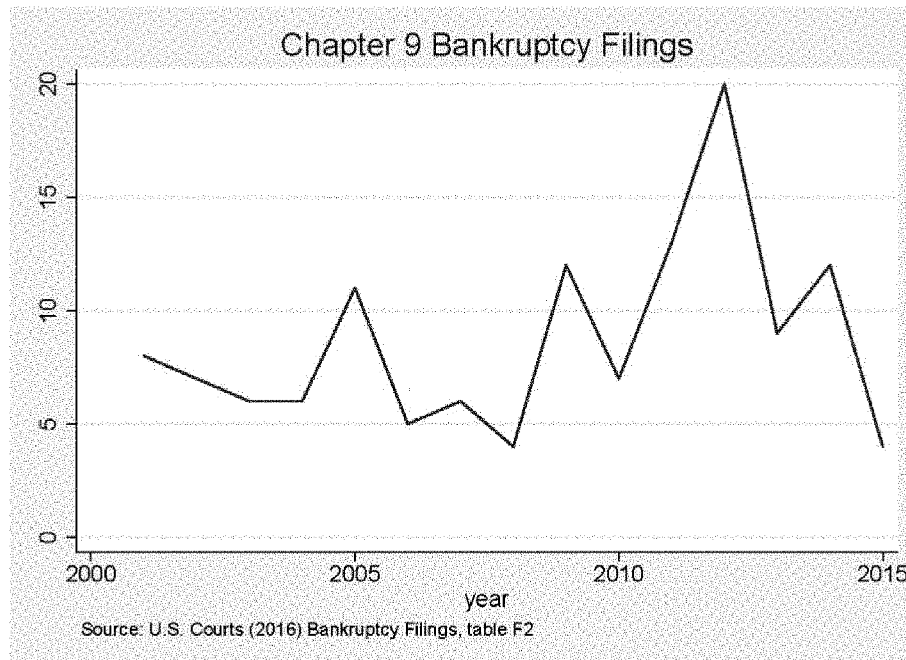

Figure 1: Number of Chapter 9 (municipal) bankruptcy filings by year.

Declines in tax bases and asset values as a result of the financial crisis caused a $1 trillion loss in state and local government

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retirement plan assets,[1] diverting a growing share of government revenues to restore funding levels; retirement plan contributions and healthcare benefit payments consumed close to a third of Detroit's annual revenues before its bankruptcy.[2] Many observers blamed public employee unions and collectively bargained pension liabilities as major contributing factors to the budget crises.[3] Union-negotiated pension benefits were seen as especially problematic because they are more likely to be underfunded than nonunion pensions.[4]

Indeed, over the past five decades, public employee retirement benefits have markedly increased in states that passed laws requiring collective bargaining relative to other states. Figure 2 shows that among states that eventually required collective bargaining, employee pension payouts increased by $3.5 billion between 1960 and 2008, while states without bargaining requirements increased by about $2 billion. Figure 3 shows that a similar pattern holds for government contributions to public employee retirement systems. How much of this increase in pension payouts and contributions can be attributed to collective bargaining rights? The empirical analysis below attempts to answer this question.

The solid line in Figure 2 and Figure 3 corresponds to states in which more than 50% of public employees were covered by collective bargaining requirements in 1996. The dashed line corresponds to states in which less than 50% were covered.[5]

[1] Jeffrey R. Brown, Robert Clark & Joshua Rauh, *The Economics of State and Local Public Pensions*, 10 J. OF PENSION ECON. & FIN. 161, 166 (2011); Alicia H. Munnell, Jean-Pierre Aubry, & Laura Quinby, *Public Pension Funding in Practice*, J. OF PENSION ECON. & FIN. 247, 248 (2011).

[2] CITY OF DETROIT OFFICE OF EMERGENCY MANAGER, FINANCIAL AND OPERATING PLAN 3 (2013).

[3] Andrew G. Biggs, *How to Become a (Public Pension) Millionaire*, WALL ST. J. (Mar. 14, 2014), https://www.wsj.com/articles/andrew-biggs-how-to-become-a-public-pension-millionaire-1394834779.

[4] Olivia S. Mitchell & Robert S. Smith, *Pension Funding in the Public Sector*, 76 REVIEW OF ECON. & STAT. 278, 287 (1994).

[5] *See infra* Section II

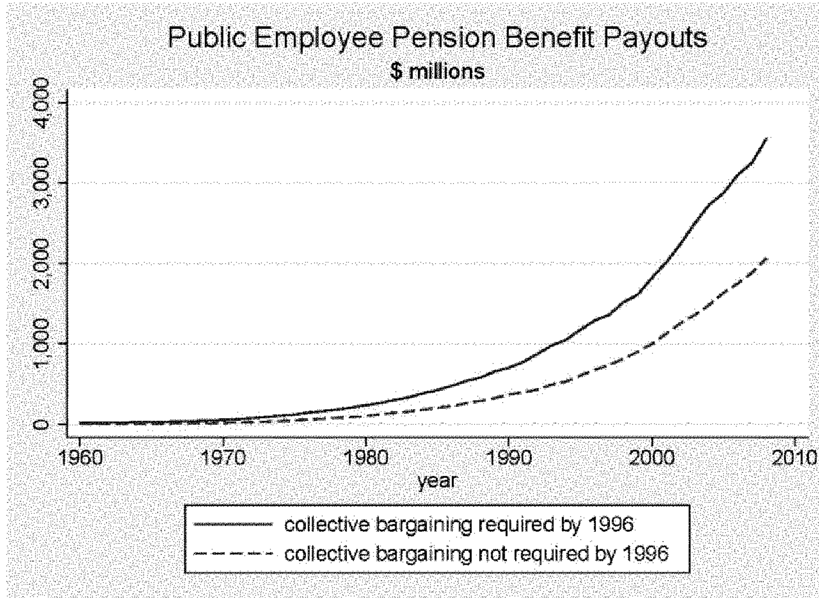

Figure 2: Average public employee retirement benefit payouts by year.

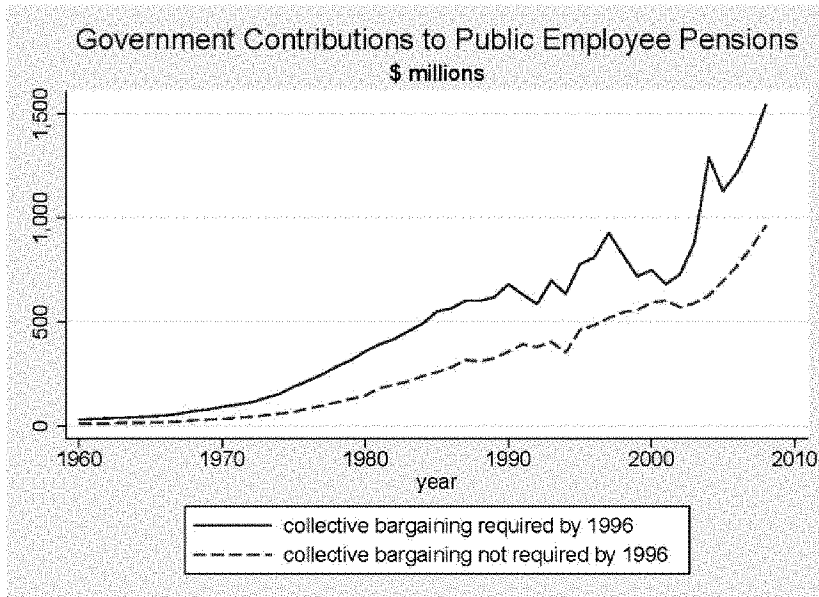

Figure 3: Average government contributions to public employee retirement systems by year.

The perceived contribution of public sector collective bargaining to government budget woes has sparked an ongoing policy debate. State legislatures in Wisconsin—one of the earliest adopters of public sector collective bargaining—and Ohio—traditionally a place of strong support

for unions—passed measures in 2011 limiting collective bargaining for public employees. The Ohio measure was subsequently overturned by referendum, while the Wisconsin measure was upheld in the Wisconsin Supreme Court in 2014. The United States Supreme Court case *Friedrich v. California Teachers Ass'n*, argued in January 2016, highlights the continuing policy debate surrounding collective bargaining's role in the public sector.[6]

The impact of collective bargaining rights on public employee pensions matters not only for policy debates over state and local government finances, but also for workers. As of 2015, approximately 39% of public employees were represented by a union, a level never reached in the private sector (currently 7.4%) even during unions' heyday in the 1940s and 1950s.[7] Thus, collective bargaining determines the compensation for a large fraction of workers in an important sector of the economy.

And for those workers, pension benefits represent an important part of overall compensation and savings for old age. Pension benefits amount to close to one-third of wage and salary compensation,[8] and are often the sole savings vehicle for old age.[9]

Despite the policy and press attention given to public unions, pensions, and their importance for state and local government finances and workers, research on the effects of collective bargaining rights on public employee pensions is surprisingly incomplete. This paper attempts to fill this gap. Using public employee retirement system financial data from the universe of state and local governments, we exploit variation in the timing of state laws regarding public sector collective bargaining in a differences-in-differences framework, and find that collective bargaining requirements significantly and substantially increase government contributions to pensions, while reducing employee contributions. The increase in employer contributions is estimated to be about three times the size of the decrease in employee contributions; thus, collective bargaining requirements significantly increase the overall generosity (and amount) of pension contributions and benefits. Collective bargaining requirements appear to have little effect on total public employment or payroll.

The case of Iowa illustrates the paper's empirical strategy and previews the results. The Iowa Public Employment Relations Act

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6 Friedrich v. California Teachers Ass'n, 136 S. Ct. 1083 (2016).

7 BUREAU OF LABOR STATISTICS, USDL-16-0158, U.S. DEP'T OF LABOR: UNION MEMBERS—2015 (2016).

8 Andrew G. Biggs & Jason Richwine, *Overpaid or Under? A State-by-State Ranking of Public-Employee Compensation* 8, 64 (Am. Enter. Inst. for Pub. Policy Research, Working Paper No. 2014-04, 2014).

9 James J. Choi et al., *Saving for Retirement on the Path of Least Resistance, in* BEHAVIORAL PUBLIC FINANCE: TOWARD A NEW AGENDA 304–51 (Russel Sage Foundation ed., 2006).

created a duty to bargain with public employee unions beginning in 1976, prior to which all matters of compensation for public employees were determined legislatively.[10] Shortly after the duty to bargain was imposed, the first public employee unions in Iowa formed in August of 1976, consistent with findings in previous literature that collective bargaining rights significantly spur union membership.[11]

While many aspects of compensation and working conditions for public employees were likely affected by the introduction of collective bargaining rights, one stark example of a response visible in Iowa government financial data is the fraction of public employee pension contributions made by employees. Figure 4 plots the fraction of contributions made by employees for each year from 1955 to 1996. Prior to the introduction of collective bargaining rights, that fraction was a remarkably stable 50%. With the introduction of collective bargaining rights in 1976, the fraction drops sharply to 40%. The timing and sharpness of the change rule out that the observed difference is due to noise or underlying trends surrounding the change in collective bargaining rights. The empirical analysis below exploits similar variation across all states to infer the effect of collective bargaining rights on this and other pension outcomes.

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10 LEGISLATIVE SERVS. AGENCY FISCAL SERVS. DIV., STATE COLLECTIVE BARGAINING IN IOWA at 1 (2014).

11 Richard B. Freeman & Robert G. Valletta, *The Effects of Public Sector Labor Laws on Labor Market Institutions and Outcomes, in* WHEN PUBLIC SECTOR WORKERS UNIONIZE 399 (Richard B. Freeman & Casey Ichniowski eds., 1988); Brigham R. Frandsen, *The Effects of Collective Bargaining Rights on Public Employee Compensation: Evidence from Teachers, Firefighters, and Police*, 69 INDUS. & LAB. REL. REV. 84, 89 (2016); Jeffrey S. Zax & Casey Ichniowski, *Bargaining Laws and Unionization in the Local Public Sector*, 43 INDUS. & LAB. REL. REV. 447, 447–48 (1990).

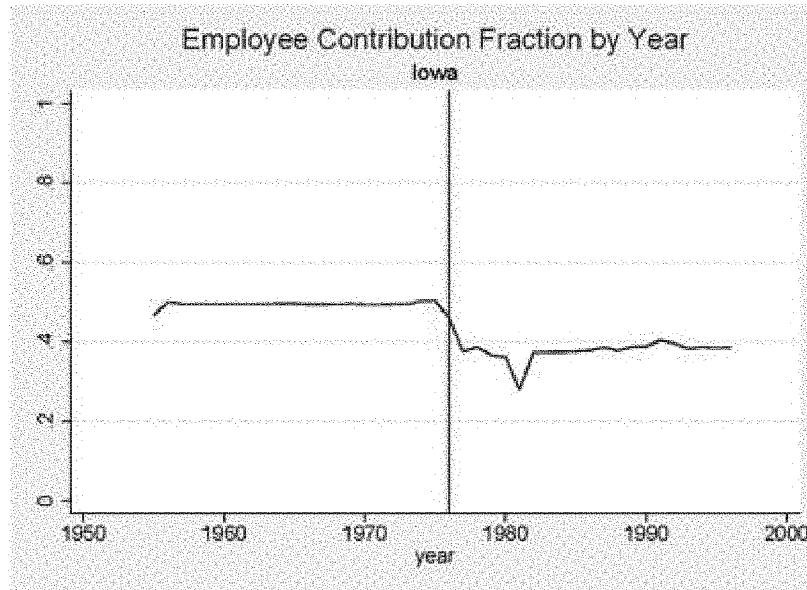

Figure 4: Fraction of contributions to Iowa's public employee retirement system made by employees for each year indicated on the horizontal axis. The vertical line shows when Iowa enacted a law requiring public employers to collectively bargain with public employers to collectively bargain with public employees.

The current paper builds on a long list of literature examining the effects of unionism and collective bargaining in the public sector. Much of this literature has focused on union presence, wages, and employment, and found that collective bargaining rights lead to substantial increases in union presence and modest increases in wages.[12] This literature may miss much of the effect on compensation as a whole if there is a tradeoff between wages and retirement benefits in the union negotiation process.[13]

Direct evidence on the effect of collective bargaining on public employee retirement benefits is much scarcer. Early evidence comparing unionized and nonunionized public employees found that unionized public employees' fringe (including pension) benefits tend to

[12] Freeman & Valletta, *supra* note 11, at 81; Frandsen, *supra* note 11, at 84; Zax and Ichniowski, *supra* note 11, at 447.

[13] Ronald G. Ehrenberg, *Retirement System Characteristics and Compensating Wage Differentials in the Public Sector*, 33 INDUS. & L. REL. REV. 470 (1980).

be more generous[14,15,16] and less likely to be fully funded.[17] Public employee unions are associated with a substantially larger increase in pensions and other fringes than straight wages and salary,[18] suggesting that unions may be more likely to shift compensation from wages to fringe benefits, as has also been found for unionized mine workers.[19] Public employees have relatively more generous pensions and are more likely to have defined benefit plans—which shift investment risk from the worker to the employer—than private sector workers.[20] Unionized workers in the private sector are also much more likely to have pensions than their non-union counterparts.[21]

This paper contributes to the prior literature as the first to identify the effect of collective bargaining rights on pension generosity and amount among public sector workers.

I. *Institutional Background*

Prior to the 1950s, public employees in all states and the federal government were prohibited from collective bargaining, in contrast with private sector workers, whose labor movement was at its zenith in the 1940s and 1950s. The difference in legal treatment of public and private sector workers was motivated in part by the concern that collective bargaining would interfere with the sovereign power of state and federal governments, or that unions' ability to influence the political process gave them undue bargaining power.[22] Nevertheless, the organization of public school teachers in New York City in 1961 by the American Federation of Teachers, and President Kennedy's 1962 Executive Order 10988 recognizing unions among federal employees marked the strengthening labor movement among public employees.

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14 Alan L. Gustman & Martin Segal, *Interstate Variations in Teachers' Pensions*, 16 INDUS. REL. 342 (1977).

15 Casey Ichniowski, *Economic Effects of the Firefighters' Union*, 33 INDUS. & L. REL. REV. 198 (1980).

16 Richard C. Kearney & David R. Morgan, *Unions and State Employee Compensation*, 12 ST. & LOC. GOV'T REV. 115 (1980).

17 Mitchell & Smith, *supra* note 4, at 278.

18 Richard B. Freeman, *Unionism Comes to the Public Sector*, 24 J. OF ECON. LITERATURE 44 (1986).

19 Henry S. Farber, *Individual Preferences and Union Wage Determination: The Case of the United Mine Workers*, 86 J. POL. ECON. 923 (1978).

20 Lewin et. al., *The New Great Debate About Unionism and Collective Bargaining in U.S. State and Local Governments*, 65 INDUS. & L. REL. REV. 754 (2012).

21 NAT'L BUREAU OF ECON. RESEARCH, PENSIONS, LABOR, AND INDIVIDUAL CHOICE 92 (David A. Wise ed., 1985).

22 Freeman, *supra* note 18, at 49.

Starting with Wisconsin in the early 1960s, states began to pass laws authorizing or requiring local and state governments to bargain collectively with public employee unions. Collective bargaining requirements typically impose on the employer a duty to bargain with an employee union should one present itself. In 1962, Wisconsin was the only state with a law imposing such a duty to bargain; by 2010, 34 states had a requirement. Table 1, reproduced from a previous study[23], shows the timing of when states enacted laws either permitting or requiring employers to bargain collectively with public employees. Most of the relevant laws took effect in either the 1960s or 1970s, although there were a number of changes after 1980, which Figure 5 shows. As mentioned above, following the financial crisis several states considered limiting public sector collective bargaining, with Wisconsin and Ohio passing measures in 2011. The Ohio measure was overturned by referendum, while the Wisconsin measure was upheld in court in 2014.

Table 1: Timing of state laws governing public sector collective bargaining rights

	Before 1970	Between 1970 and 1980	After 1980
	A. Teachers		
Permitted	AK, AR, CA, GA, ID, IL, KY, MN, NE, NH, NM, OR, UT, VA, WV	AZ, CO, LA, OH, TN, WY	-
Required	CT, MA, MI, NJ, NY, RI, VT, WA, WI	AK, CA, DE, FL, HI, ID, IN, IA, KS, ME, MD, MN, MT, NV, NH, ND, OK, OR, PA, SD	IL, NE, OH, TN, NM
	B. Fire fighters		
Permitted	AL, AK, AR, CA, ID, IL, MN, MO, NH, NM, OR, UT, VA, WV	AZ, GA, IN, KS, LA, SC	-
Required	CT, DE, ME, MA, MI, NJ, NY, PA, RI, VT, WA, WI, WY	AK, CA, FL, HI, ID, IA, KY, MN, MT, NE, NV, NH, OK, OR, SD,	OH, IL

[23] Frandsen, *supra* note 11, at 92.

		TX	
	C. Police		
Permitted	AK, AR, CA, ID, IL, MN, NH, NM, OR, UT, VA, WV	AZ, IN, KS, LA, SC	-
Required	CT, DE, MA, MI, NJ, NY, PA, RI, VT, WA	AK, CA, FL, HI, IA, KY, ME, MN, MT, NE, NV, NH, OK, OR, SD, TX, WI	OH, IL

Notes: Timing of passage of state laws either permitting or requiring employers to bargai collectively with public employees. Data are from Valletta and Freeman (1988), Kim Rueben' update thereof, Lindy (2011), and the National Council on Teacher Quality. Reproduced fron Frandsen (2016)

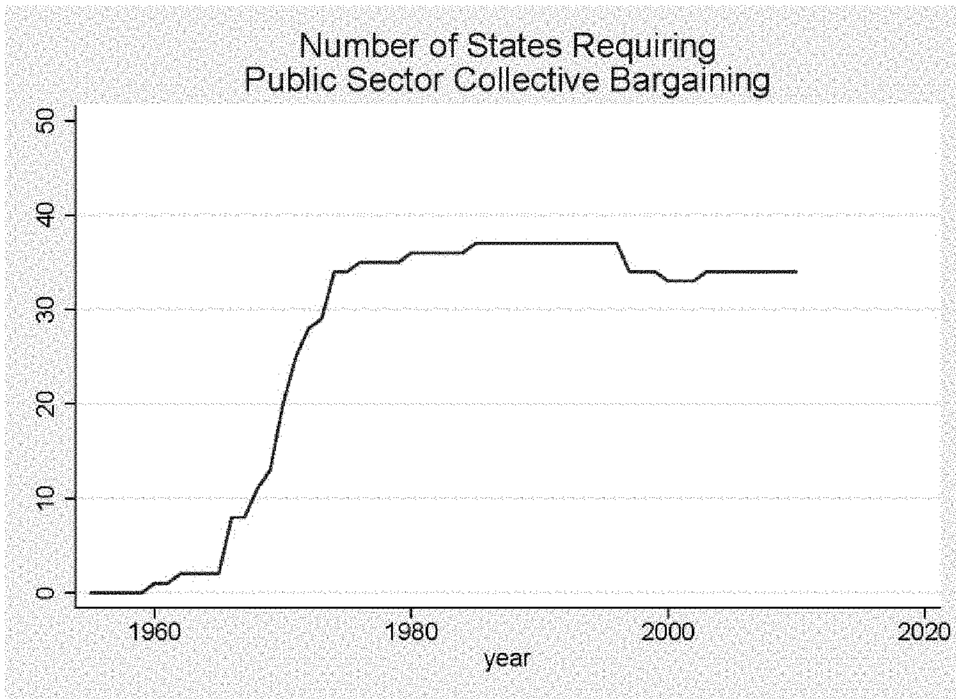

Figure 5: The number of states (excluding District of Columbia) with laws imposing on public sector employers a duty to bargain with employees. A state is considered to have a collective bargaining requirement if the requirement exists for any occupation group. Data are from Valletta and Freeman (1988) and Frandsen (2016).

II. *DATA*

The U.S. Census Bureau's Annual Surveys of State Government Finances and Census of Governments provide the principle data for this study.[24] The Census Bureau compiles data from these sources in the machine-readable State Government Finances database. This database contains annual information on numerous revenue, expenditure, and asset holdings measures for each state dating back as far as 1902, although the consecutive series for all states begins in the 1950s. The revenue and expenditure categories include data on government-administered public employee retirement systems. The revenue measures provide the basis of the pension contribution outcomes used in this study, and the expenditure measures provide the basis of the benefit outcomes. Contributions are separately reported as employee contributions, local government contributions, and state government contributions. We construct our measure of employer pension contributions as the sum of local and state government contributions. Our measure of total pension contributions is the sum of employee and employer contributions, and our measure of the fraction of contributions made by the employee is constructed by dividing employee contributions by total contributions.

Pension expenditures include a category called "Benefit Payments," defined as "payments to which participants may be entitled under a pension plan, including pension benefits, death and disability benefits due on termination of employment, and all other benefits directly paid from the retirement fund to recipients during the fiscal year surveyed."[25] This quantity therefore comprises our benefit outcome measure. The series for several states contained observations that were clearly erroneous (e.g., missing decimal points). These observations were replaced by linear interpolations between valid years, although the results are not sensitive to the correction.

Data on public sector collective bargaining statutes are based on a dataset originally compiled in previous literature.[26] This dataset codes the relevant laws for every state and every year from 1955 to 1985 for five different occupational groups. This dataset was later extended by Kim Rueben to cover the years through 1996. While state laws vary substantially in their exact provisions for public sector collective bargaining, states fall roughly into three categories: collective

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[24] U.S. Census Bureau, *State Government Finances Tables 1951-2008, 2010*, U.S. CENSUS BUREAU, https://www.census.gov/programs-surveys/state/data/tables.html (last visited May 18, 2018).

[25] U.S. Census Bureau, *Glossary*, U.S. CENSUS BUREAU, https://www.census.gov/glossary/#term_Benefits (last visited May 18, 2018).

[26] Freeman & Valletta, *supra* note 11, at 399 (the description here closely follows Frandsen, *supra* note 11, at 91).

bargaining prohibited, permitted, and required. The prohibited category includes statutes that explicitly prohibit state employers from bargaining with worker representatives, but also situations where state law makes no provision for collective bargaining, as courts have typically interpreted this as prohibiting collective bargaining.[27] The permitted category includes statutes which authorize the employer to bargain and which give employee organizations the right to present proposals or meet and confer with the employer. The required category includes statutes which either imply or make explicit the duty of the employer to bargain should the workers demand it. Our regressor of interest is an indicator for whether state law requires public employers to bargain collectively should a union present itself. The vast majority of states prohibit public sector employees from striking. The few states that grant public employees the right to strike all require collective bargaining as well. Since pension information is not available for each occupation group separately, we take a weighted average of the collective bargaining requirement indicators in each state and year, using the number of public sector employees in each occupation group (based on the Current Population Survey, or CPS) as weights. The necessary occupation variables are available in the CPS beginning in 1963. In practice, the occupation weighting matters little, as in the vast majority of cases the collective bargaining requirement indicator is equal across the observed occupation groups.

Other data used in the study include state unemployment rates reported by the Bureau of Labor Statistics[28], and state GDP and population, as reported by the Census Bureau.[29]

Table 2 reports means and sample sizes for the variables used in this study. The first column shows overall means. The second and third columns show means for the subsamples in which collective bargaining is required and not required, respectively. The sample includes 1,383 state-year observations from 1963 to 1996.[30] Six hundred and twenty-nine, or roughly 45%, are from state-years in which statutes required collective bargaining for the majority of public employees. The second row shows that

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27 Freeman & Valletta, *supra* note 11, at 82.

28 Bureau of Labor Statistics, U.S. Dep't of Labor, *Local Area Unemployment Statistics Map*, https://data.bls.gov/map/MapToolServlet.

29 U.S. Census Bureau, *Population Projections*, Census.gov, https://www.census.gov/programs-surveys/popproj/data/datasets.html; U.S. Bureau of Econ. Analysis, U.S. Dep't of Commerce, *Interactive Data: Gross Domestic Product (GDP) By State*, https://bea.gov/iTable/iTable.cfm?reqid=99&step=1#reqid=99&step=11&isuri=1&9993=levels&9936=-1&9935=-1&9934=5&9995=beastandard&9904=naics&9905=1&9907=2016&9990=99&9901=1200&9902=1&9903=200.

30 From 1968 to 1976 the CPS did not separately identify all states, so during these years several state observations are missing.

in these states in fact nearly all (97 percent) of public employees were covered by collective bargaining requirements. Row 3 shows that states where collective bargaining is required tend to be somewhat larger, and (in row 4) slightly more urban. The remaining rows show that states with collective bargaining requirements also tend to have larger public sectors in terms of employees and payroll, and larger and more generous public employee retirement systems, although this does not necessarily imply anything about the causal effect of the collective bargaining requirements. Causal effects will be identified in a differences-in-differences framework, as described in the following section.

Table 2: Sample Means by Public Employee Collective Bargaining Law Status

		CB law	
	All	Required for >50% of Public Employees	Not required for >50% of Public Employees
N (number of state-years)	1,383	629	754
Fraction of public employees covered by collective bargaining requirement	0.46	0.97	0.03
Population	5,016,064	5,429,966	4,670,779
Fraction urban	0.68	0.71	0.65
State government employment (FTE)	59,764	61,408	57,629
State government payroll ($ millions)	124	138	107
Local government employment (FTE)	181,596	192,789	167,060
Local government payroll ($ millions)	344	401	269
Total public employee retirement benefit expenditures ($1,000)	340,446	506,887	201,598
Total public employee retirement benefit expenditures / population ($1,000)	0.064	0.087	0.045
Total contributions to public employee retirement system ($1,000)	484,425	672,156	327,608
Employer	330,435	481,261	204,613

contributions ($1,000)			
Employee contributions ($1,000)	153,990	190,895	122,995
Fraction of contributions made by employees	0.36	0.32	0.40

Notes: Number of state-year observations and means for the variables listed in the left hand column. Data are from Valletta and Freeman (1988) and the Census Bureau' Historical Database on Individual Government Finances.

III. *ECONOMETRIC FRAMEWORK*

Identifying the effects of collective bargaining requirements is complicated by the fact that states which pass such laws differ from states that do not, in possibly unobserved ways that may also drive differences in public employee pension generosity. This paper takes advantage of the different timing across states of collective bargaining law changes to eliminate potentially confounding bias in a differences-in-differences design, similar to that employed in previous literature.[31] This framework relates public employee pension generosity measure Y_{st} for state s in year t to an indicator for a law requiring collective bargaining CB_{st} in regression equations such as the following:

$$\text{Specification (1): } Y_{st} = \delta CB_{st} + X_{st}'\beta + \alpha_s + \gamma_t + f(s,t) + \varepsilon_{st},$$

where X_{st} is a vector of time- and state-varying covariates including state GDP, unemployment rate, population, urbanicity, and right-to-work status. Measures of public sector employment and pay are considered outcome variables and are therefore not included in the set of controls because of endogeneity concerns. The α_s terms control for any unobserved state-level factors that are constant over time. The γ_t terms control for factors that affect all states but may change from year to year, such as macroeconomic shocks. The $f(s, t)$ term controls for time-varying relative changes across states that could lead to bias even after controlling for state effects $\{\alpha_s\}$ and year effects $\{\gamma_t\}$ if they are correlated with changes in collective bargaining laws. The disturbance term ε_{st} may have arbitrary serial correlation within states, but is assumed to be uncorrelated with CB_{st}. Inference is therefore clustered at the state level.

While the most general specification for $f(s,t)$, namely state-by-year interactions, would be collinear with CB_{st}, the empirical work uses several slightly more restrictive specifications for $f(s,t)$. The first is a set of state-specific linear trends $\{\alpha_s \times t\}$, which control for any

[31] Frandsen, *supra* note 11, at 94-96.

unobserved state-level factors that trend over time. A second specification for $f\ (s,\ t)$ groups states by Census region (Northeast, Midwest, West, South) and includes a set of region-by-year interactions in addition to the state-specific trends and might be expected to be least susceptible to bias. The identifying assumption is that any underlying unobserved factors at the state level that influence both the outcome and the adoption of public-sector collective bargaining laws vary smoothly over time.

The identifying assumptions implicit in specification (1) are strong, but, fortunately, testable. The assumptions imply that shocks to pension amount or generosity relative to a state-level linear trend should be uncorrelated with future law changes. In other words, future law changes should not "predict" past innovations in the outcome variable. This is the generalization of checking for parallel trends in the canonical two-group differences-in-differences design.

The results of this overidentification test are encouraging, and suggest that in this setting the differences-in-differences specification (1) plausibly identifies the causal effect of collective bargaining requirements on public employee pension generosity. Figure 6 plots the results of this exercise for total contributions (in thousands of dollars) to public employee retirement systems.

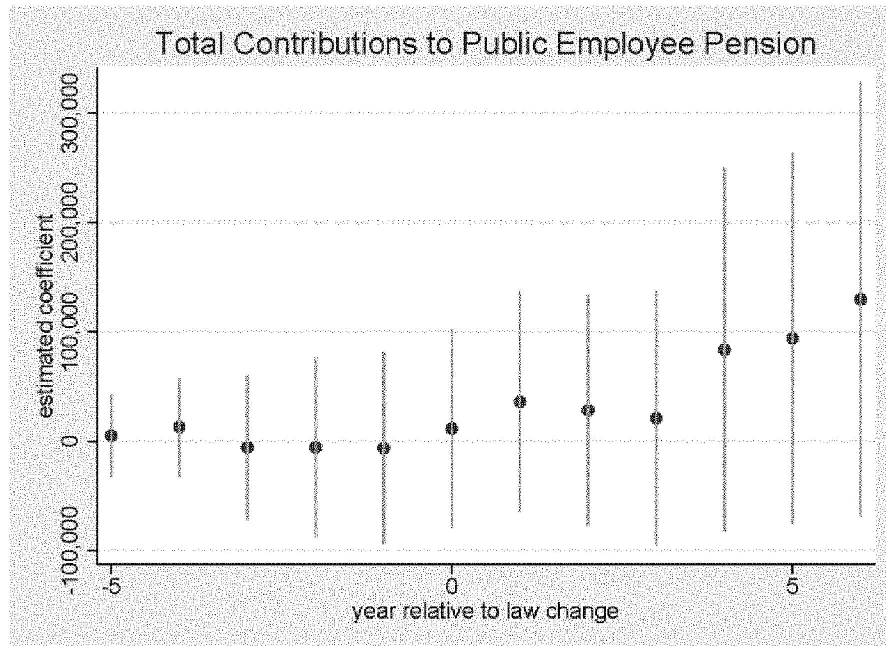
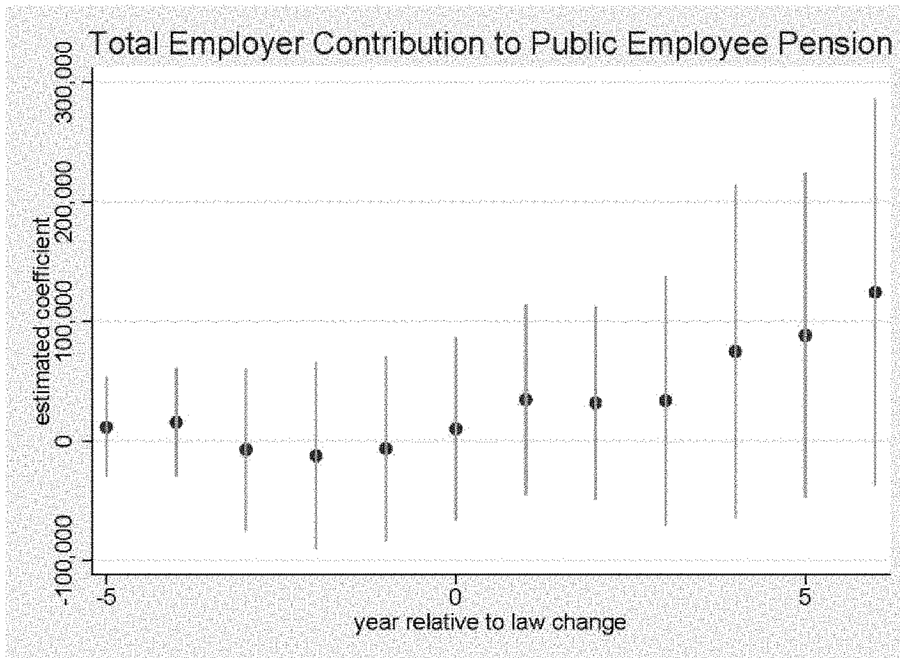


Figure 6: Estimated coefficients and 95-percent confidence bars (clustered by state) from a regression of total contributions to the public employee retirement systems ($1,000) on leads and lags of collective bargaining law changes for public employees relative to the year in which the law change took effect. All regressions control for year effects, state trends, state unemployment rate, and state

GDP.

The graph shows estimated coefficients on leads and lags of collective bargaining law changes ranging from five years before a law change to six-plus years after, normalized to the period prior to a law change. The coefficients corresponding to each year prior to a law change are similar and close to zero, implying that future law changes do not, in fact, predict past innovations in the outcome, consistent with the identifying assumptions. As a preview to the results in the next section, coefficients following the law change become larger, suggesting that collective bargaining requirements increase total pension contributions, although the individual coefficients in the graph are not precisely estimated. Figures 7, 8, and 9 perform the same exercise, for employer contributions, employee contributions, and total pension benefit expenditures, respectively. In each case, the coefficients corresponding to periods before law changes are near



zero, consistent with the identifying assumption.

Figure 7: Estimated coefficients and 95-percent confidence bars (clustered by state) from a regression of the total employer contribution to the public employee retirement system ($1,000) on leads and lags of collective bargaining law changes for public employees relative to the year in which the law change took effect. All regressions control for year effects, state trends, state unemployment rate, and state GDP.

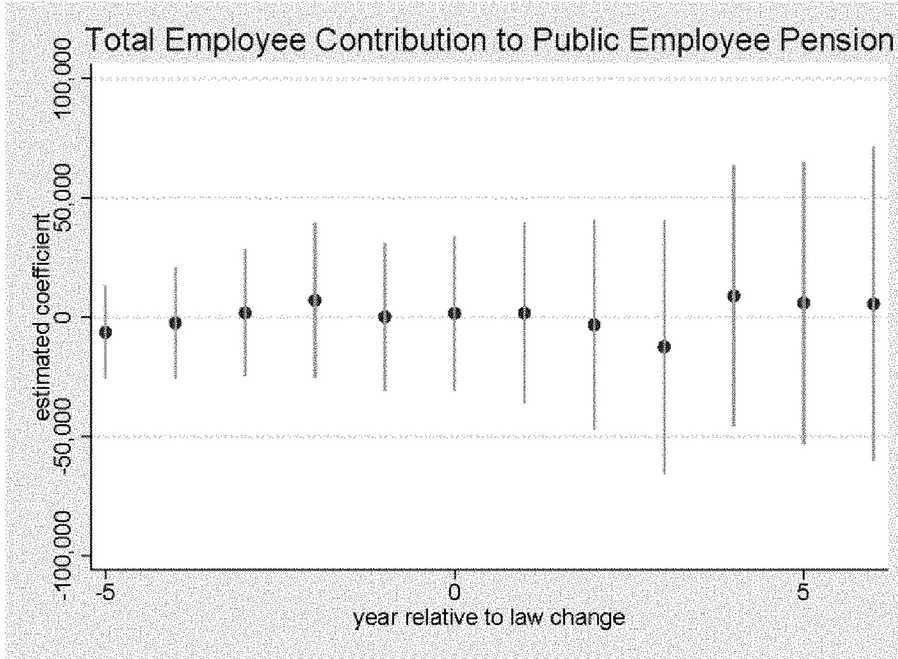


Figure 8: Estimated coefficients and 95-percent confidence bars (clustered by state) from a regression of the total employee contribution to the public employee retirement system ($1,000) on leads and lags of collective bargaining law changes for public employees relative to the year in which the law change took effect. All regressions control for year effects, state trends, state unemployment rate, and state GDP.

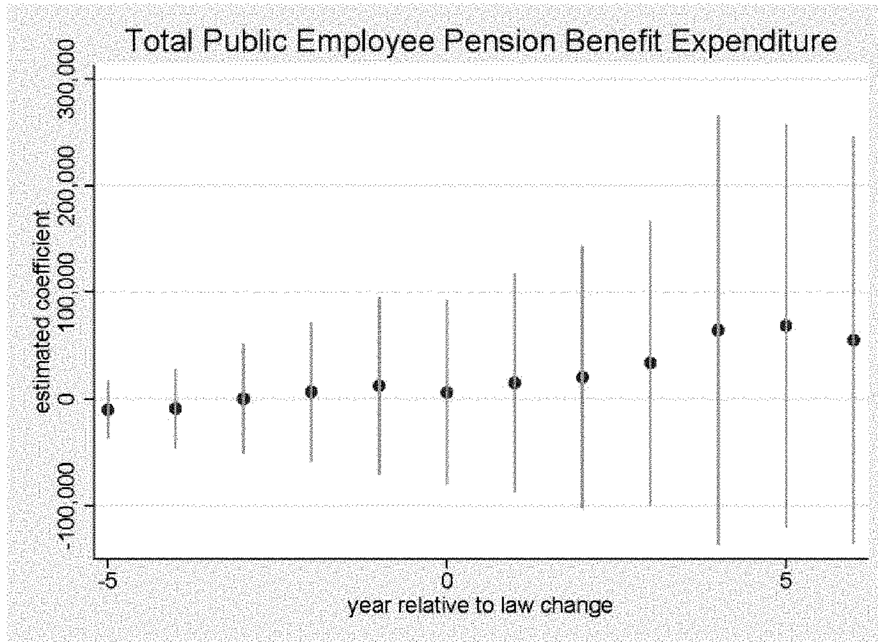


Figure 9: Estimated coefficients and 95-percent confidence bars (clustered by state) from a regression of total public employee retirement benefits ($1,000) on leads and lags of collective bargaining law changes for public employees relative to the year in which the law change took effect. All regressions control for year effects, state trends, state unemployment rate, and state GDP.

IV. *EFFECTS OF COLLECTIVE BARGAINING LAWS ON PUBLIC EMPLOYEE PENSIONS*

Differences-in-differences estimates suggest that laws imposing collective bargaining requirements on public sector employers significantly and substantially increased pension generosity. Table 3 reports estimates of the effects of laws requiring collective bargaining on several measures of pension generosity.

Table 3: Estimated Effects of Collective Bargaining Requirements on Public Employee Pensions

	X-section	Difference-in-differences		
Dependent variable	(1)	(2)	(3)	(4)
ln(retirement contributions)	0.198**	0.125*	0.172*	0.160*
	(0.0746)	(0.0732)	(0.0864)	(0.0844)
ln(employer contributions)	0.287***	0.230***	0.290***	0.278***
	(0.0919)	(0.0817)	(0.0912)	(0.0905)
ln(employee contributions)	-0.169	-0.157	-0.0921	-0.0987
	(0.197)	(0.131)	(0.139)	(0.137)
Fraction contributed by employee	-0.0630**	-0.0685***	-0.0751***	-0.0742***
	(0.0308)	(0.0213)	(0.0218)	(0.0221)
ln(retirement benefits)	0.330***	0.0947	0.138*	0.134*
	(0.0868)	(0.0733)	(0.0744)	(0.0764)
Baseline controls?	Y	Y	Y	Y
State effects?	N	Y	Y	Y
State trends?	N	Y	Y	Y
Region x year effects?	N	N	Y	Y
Controls for right-to-work	N	N	N	Y

and urbanicity?

Notes: Regression coefficients and clustered standard errors (by state) on the collective bargaining (CB) law variable. All regressions control for year effects, state unemployment rate, state GDP, the natural log of the population, and the factors indicated in the bottom rows. Data are from Valletta and Freeman (1988) and the Census Bureau's Historical Database on Individual Government Finances. *Statistically significant at the .10 level; **at the .05 level; ***at the .01 level.

First, the estimates suggest collective bargaining requirements increased the total contributions to public employee retirement systems. The first row of Table 3 reports estimated coefficients from regressions of the natural log of contributions to public employee retirement systems on an indicator for a state law requiring collective bargaining and controls. The first column shows that in the cross section, states with collective bargaining requirements have approximately 19.8 log points more contributions to public employee retirement systems than states without such laws, controlling for observed state characteristics. The differences-in-differences estimates in columns 2 through 4 control additionally for state trends (column 2), region-by-year effects (column 3), and controls for public sector right-to-work status and urbanicity (column 4). These specifications suggest that part of this difference may be due to unobserved factors, but the estimated causal effect of the laws remains a substantial and marginally significant 12.5 to 17.2 log point increase in retirement contributions.

The marginally significant increase in overall contributions masks a large and highly significant increase in employer contributions, and a more modest decrease in employee contribution amounts. The second row of Table 3 shows estimates of the effects on the natural log of employer-contributed benefits. The estimates imply collective bargaining laws increased employers' contributions to pensions by about 23 to 29 log points. Estimates are quite stable across specifications and robust to inclusion of state trends (column 2), region-by-year effects (column 3), and additional state-year controls (column 4). The third row shows that point estimates on the natural log of employee contributions are negative, although not significantly different from zero.

The large increases in the employer contribution and possible decreases in the employee contribution imply that collective bargaining requirements significantly reduce the fraction of retirement contributions made by employees. The fourth row of Table 3 examines this outcome directly. The estimates show that the employee's contribution as a fraction of total pension contributions decreased by about 6.5 to 7.5 percentage points. These estimates are also quite stable

across specifications, and are robust to the inclusion of state trends and region-by-year effects.

The next set of estimates suggests that the large increases in retirement contributions, especially on the part of employers, were also accompanied by increases in retirement benefits paid out. The fifth row of Table 3 reports effects of collective bargaining laws on the natural log of total retirement benefits. The first column shows that in the cross-section states with collective bargaining requirements pay out approximately 33 log points more in public employee retirement benefits than states without such laws, controlling for observed state characteristics. The differences-in-differences estimates in columns 2 through 3 control additionally for state trends (column 2), region-by-year effects (column 3), and controls for public sector right-to-work status and urbanicity (column 4). These estimates suggest, however, that most of this difference may be due to unobserved factors. The point estimates in these specifications are 9.5 to 13.8 log points, but are at most marginally significant.

In summary, the estimates provide evidence that collective bargaining requirements increase the amount and generosity of public employee retirement benefits. This increase in generosity was driven in part by an overall increase in pension contributions, but mostly by an increase in the portion contributed by the employer. There is suggestive evidence that benefits paid out also increased.

Are the effects on retirement benefits driven by or offset by effects on public sector payroll and employment? Differences-in-differences estimates suggest not; public sector collective bargaining requirements appear to have little effect on public sector payroll or employment. Table 4 reports estimates and standard errors from regressions of measures of state and local government payroll and full-time equivalent (FTE) employment on an indicator for collective bargaining requirements and controls. The first three rows of column 1 show that in the cross-section collective bargaining requirements are associated with slightly (but not significantly at conventional levels) larger payroll. Columns 2 through 4 show, however, that the positive association is eliminated when controlling for state effects and state trends: the difference-in-differences estimates are close to zero, relatively precisely estimated, and insignificant. The fourth through sixth rows show effects on state and local full time equivalent (FTE) employment. The first column shows that in the cross-section, collective bargaining requirements are somewhat negatively associated with FTE employment. Again, however, the difference-in-differences estimates in columns (2) through (4) show much of the observed association is eliminated when controlling for state effects and state trends, although the point estimates tend to be negative. This is consistent with the small

wage effects and modest reductions in hours found in previous literature.[32]

[32] Id. at 85-86, 100, 108.

Table 4: Estimated Effects of Collective Bargaining Requirements on Public Payroll and Employment

	X-section	Difference-in-differences		
Dependent variable	(1)	(2)	(3)	(4)
ln(state government payroll)	0.0841	0.0293	0.0169	0.0131
	(0.0550)	(0.0211)	(0.0227)	(0.0216)
ln(other government payroll)	0.0793	-0.0221	-0.0106	-0.0106
	(0.0682)	(0.0188)	(0.0200)	(0.0204)
ln(total government payroll)	0.0972*	-0.0209	-0.00938	-0.0171
	(0.0496)	(0.0191)	(0.0250)	(0.0237)
ln(state government FTE employment)	-0.0659	-0.0122	-0.0272	-0.0312*
	(0.0507)	(0.0205)	(0.0174)	(0.0184)
ln(other government FTE employment)	-0.0905*	-0.0240	-0.0154	-0.0143
	(0.0489)	(0.0204)	(0.0223)	(0.0227)
ln(total government FTE employment)	-0.0639**	-0.0317	-0.0216	-0.0279
	(0.0295)	(0.0191)	(0.0229)	(0.0223)
Baseline controls?	Y	Y	Y	Y
State effects?	N	Y	Y	Y
State trends?	N	Y	Y	Y
Region x year effects?	N	N	Y	Y
Controls for right-to-work and urbanicity?	N	N	N	Y

Notes: Regression coefficients and clustered standard errors (by state) on the collective bargaining (CB) law variable. All regressions control for year effects, state unemployment rate, state GDP, the natural log of the population, and the factors indicated in the bottom rows. Data are from Valletta and Freeman (1988) and the Census Bureau's Historical Database on Individual Government Finances. *Statistically significant at the .10 level; **at the .05 level; ***at the .01 level.

V. *DISCUSSION*

What do the empirical results imply for state and local government finances and public employee compensation? This section uses the point

estimates reported in the previous section together with aggregate data on state and local government budgets in back-of-the-envelope calculations to put the magnitude of the estimated effects in context.

For pension payouts and contributions, the goal is to approximate the dollar amount attributable to the effects of collective bargaining requirements in a given year, say, 2008. If $\bar{X}$ is the mean payout or contribution as of 2008 in the n^{CB} = 27 states that eventually adopted collective bargaining requirements, and $\hat{\delta}$ is the estimated effect in log points, then the total amount attributable to collective bargaining requirements in those states is approximately

$$\text{Specification 2: } \Delta X = n^{CB}\bar{X}\hat{\delta}/\left(1+\hat{\delta}\right)$$

The results imply that collective bargaining rights account for approximately $11.6 billion in annual state and local government pension system payouts in the states which require them. This figure was arrived at by evaluating expression (2) with the 2008 mean pension payout among states with public sector collective bargaining requirements of $3.5 billion (see Figure 2) and the estimated effect of collective bargaining rights on log pension payouts of .138 (see third column of Table 3). The attributed $11.6 billion of additional pension payouts represents 29.2% of the difference in growth in pension expenditures between states that eventually did and did not adopt collective bargaining requirements over the period 1960 to 2008 shown in Figure 2. Clearly other factors also have contributed to the observed difference, but collective bargaining requirements explain a substantial fraction.

Similarly, collective bargaining rights can account for $9.4 billion in annual state and local government contributions to employee pension systems. This calculation is based on 2008 mean contributions in states requiring collective bargaining of $1.5 billion (see Figure 3) and the estimated effect of collective bargaining rights on log employer contributions of .290 (see third column of Table 3). The additional $9.4 billion in government contributions make up 61.9 percent of the difference in growth in government pension contributions between states that eventually did and did not adopt collective bargaining requirements from 1960 to 2008.

Employee contributions, on the other hand, declined. Collective bargaining requirements account for a reduction in annual employee contributions of about $2 billion (based on a mean of $730 million and an effect on log employee contributions of -.0921). Collective bargaining requirements thus account for a net increase in contributions of $7.4 billion.

Comparing the increase in payouts of $11.6 billion to the net increase in contributions of $7.4 billion suggests that collective

bargaining requirements may have contributed to pension system underfundedness, consistent with previous findings that public unions are associated with less fully-funded pension benefits.[33] This is only suggestive, however, as a full analysis of pension system fundedness requires data on the present value of outstanding pension obligations, something not available in the state government finances data used in this study.

While the impact of collective bargaining requirements on state and local government finances appears to be substantial, of course the counterpart is that the benefits to workers were also substantial. Taking the average salary of a full-time state employee of $50,461 as a baseline, with additional pension benefits equivalent to 29 percent of salary,[34] and assuming little impact of collective bargaining rights on employment,[35] the impact of collective bargaining requirements on log pension contributions of .172 (Table 3, column 3) amounts to an increase in compensation of approximately $\$50,461 \times .29 \times .172 = \$2,517$ per year, or approximately 5 percent of a full-time state employee's salary. This increase in pensions does not appear to crowd out other forms of compensation; these magnitudes are similar to the effects on wage and salary compensation for police and fire fighters found in previous literature.[36] Collective bargaining requirements thus mean a substantial increase in compensation and retirement savings for public sector workers.

CONCLUSION

The introduction of collective bargaining requirements starting in the 1960s constituted a dramatic change in labor relations in the public sector with potentially major consequences for state and local government finances. This paper analyzed a set of such consequences particularly salient to ongoing state and local policy debates in the wake of the financial crisis: the impact of collective bargaining rights on public employee pensions. The estimated effects on pensions are statistically significant and economically large. Collective bargaining rights primarily led to more generous pensions; the largest estimated effects were on employer contributions. The effects on overall pension amounts, measured by total contributions or payouts, however, are also substantial. Back-of-the-envelope calculations imply that collective bargaining requirements can account for the lion's share of the observed

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33 Mitchell & Smith, *supra* note 4, at 278.

34 Biggs & Richwine, *supra* note 8, at 45.

35 Frandsen, *supra* note 11, at 85-86, 100, 108.

36 *See generally* Frandsen.

differences in growth of government contributions to pensions over the past five decades, and may have contributed to pension plan underfundedness.

Taken together with existing evidence on the effects of collective bargaining rights on wages and employment, these results also imply that collective bargaining rights substantially increase total public employee compensation. Policy debates about collective bargaining in the public sector therefore have real stakes for state and local public finances and employee welfare.

This study has several limitations. One is that the pension outcomes combined all public employee occupation groups. Evidence from wages suggests aggregate effects may mask important heterogeneity across occupation groups. Another limitation is that the data did not include measures of the outstanding pension obligations by state, prohibiting full analysis of pension fundedness. Third, effects on pension payouts will necessarily be attenuated when looking at effects measured soon after law changes, as the number of new retirees is small; measures of contractually promised pension benefits rather than actual payouts may capture a larger effect. Identifying how the effects of collective bargaining rights on public employee pensions vary by occupation, fully analyzing their impact on public employee retirement system fundedness, and analyzing effects on contractually promised pension benefits is left to future research.

ON CONGLOMERATION
WHEN SHOULD GOVERNMENT ACCEDE TO CONGLOMERATE MERGERS IN THE DEFENSE INDUSTRY?

James Hasik

The Trump administration's unfolding review of the defense industrial base is yet to result in substantive changes to policy, but the Obama administration's *de facto* views had a singular, restricting fence: No mergers amongst large prime contractors. In 2015, however, the Defense Department was caught flat-footed by the Justice Department's quick clearance of Lockheed Martin's acquisition of Sikorsky. Under Secretary Frank Kendall, the Pentagon's procurement chief, initially railed against the deal as a *conglomerate* merger gone too far. For a time, the government seemed set to oppose mergers whose mere size was presumed to lead to political power.

The policy was at best unclear, but more problematically, it may also have been economically inefficient, if it were to cramp industrialists' imagination into unimaginative corporate structures. The dynamically efficient structures of the future military-industrial base may run the gamut from staid monopolies to vigorous entry. For understanding the regulatory problems of decrying conglomerate mergers, an instructive case may be the European Commission's prohibition in 2001 of the planned deal between General Electric and Honeywell. Both government policymakers and corporate strategists should inform their own decisions on mergers with a thoroughly grounded understanding of the principles of defense-industrial organization.

A STRUCTURAL TAXONOMY OF MERGERS, THEIR COSTS, AND BENEFITS

Some simple theory codifying different types of mergers is a useful beginning.[1]

Horizontal mergers unite companies in the same industry, at the same stage of production. These bring scale economies, as fixed costs are spread amongst a greater volume of production, and overhead functions are

[1] *See* Eric E. Holland, *Using Merger Review to Cure Prior Conduct: the European Commission's GE/Honeywell Decision*, 103 COLUM. U. L. REV. 74, 76-92 (2003) (applying these ideas to the GE/Honeywell case); S*ee generally* William E. Kovacic, *Competition Policy in the Postconsolidation Defense Industry*, 44 ANTITRUST BULL. 421, 421-87 (Summer 1999) (discussing antitrust problems in the context of defense).

amalgamated. Scale may also provide the financial wherewithal to engage in expensive acts of innovation.[2] Even if the government is funding contractors' research and development, the receiving firms need the organizational capacity to execute the work. Horizontal mergers also bring issues of market power and greater potential for collusion. The agglomeration of massive companies in the petroleum industry of the 1880s was a driving force behind the development of antitrust law in Canada and the United States, the first jurisdictions for that sort of jurisprudence.[3]

Competition, after all, is not actually what most businesses crave; noted venture capitalist Peter Thiel says it's "for losers."[4] Indeed, the Joint Strike Fighter (JSF) program was *intended* nearly to monopolize fighter aircraft production worldwide, and to the U.S. government's benefit.[5] American market power in defense may still be a "powerful, if undervalued, diplomatic tool in the United States' political arsenal," but the U.S. as a whole has lost its overall dominance in the market.[6] American industry made 60% of global international arms sales in the 1990s, but only 30% by 2011.[7] Today, the JSF remains a salient military program that the Congress cannot bring itself to cut, whatever its burden on the budget.[8]

Vertical mergers occur between companies in the same line of business, but at different stages of production. These bring benefits of information and managerial coordination up and down the supply chain. They also carry the potential for vertical restraint, where the combined company forecloses a later-stage competitor's access to the output of the earlier-stage business. Prohibitions against tyings and exclusive dealings, though only where they substantially lessened competition, were introduced in the U.S. with the Clayton Antitrust Act of 1914.

Conglomerate mergers can bring benefits of bundling and scope efficiencies, as fixed costs are spread, to some extent, from product line to product line. In decades past, the benefits have sometimes been overblown,

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2 *See* JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY 68 (1942) (stating this view for the first time).

3 The first statues were the Canadian Competition Act of 1889 and the Sherman Antitrust Act of 1890. *See also* Syed Tariq Anwar, *EU's Competition Policy and the GE-Honeywell Merger Fiasco: Transatlantic Divergence and Consumer and Regulatory Issues*, 47 THUNDERBIRD INT'L BUS. REV. 601, 605 (2005).

4 Peter Thiel, *Competition Is for Losers*, WALL STREET J., (Sept. 12, 2014, 11:25 AM), https://www.wsj.com/articles/peter-thiel-competition-is-for-losers-1410535536; *see also* PETER THIEL & BLAKE MASTERS, ZERO TO ONE: NOTES ON STARTUPS, OR HOW TO BUILD THE FUTURE (2014).

5 Ethan B. Kapstein, *Capturing Fortress Europe: International Collaboration and the Joint Strike Fighter* 46 SURVIVAL 137, 137-59 (2004).

6 Stephanie G. Neuman, *Defense Industries and Global Dependency*, 50 ORBIS 429, 429 (2006).

7 Jonathan Caverley & Ethan B. Kapstein, *Arms Away: How Washington Squandered Its Monopoly on*
Weapons Sales, 91 FOREIGN AFF. 125, 125 (2012).

8 John T. Bennett, *Betting on the F-35*, 29 DEF. NEWS 22, 14 (2015).

and investors underwhelmed. Whatever the reality, the largest defense contractors today are practical conglomerates; more commercially-oriented firms do not so often span industries from automotive to aerospace to shipbuilding. The commonality lies with the customer, but the political and economic threats are similarly debatable. Today, only a minority of competition economists agree that portfolio power or range effects can entrench competitive positions.

Overall, monopoly sellers are not preferred by military buyers, as they bring at least four serious problems. First is the *deadweight loss*. Monopolists tend to generate rents by pricing considerably higher than marginal cost, and simultaneously restraining output. Economic rents are profits in excess of those that should be expected in a market that is at least partially competitive.[9] Monopolists then generally plow a portion of those rents back into *wasteful* rent-seeking—economically inefficient political lobbying to safeguard their positions.[10] As noted above, they should have plenty to spend, but simply *less incentive for innovation*.[11] Monopolists also generally have low technical efficiency, as they have little reason to invest in capital or process improvements from their secure positions. Indeed, if they are regulated on cost, improvements in their cost structures can actually be contrary to their economic interests.

EVOLVING U.S. POLICY ON DEFENSE-INDUSTRIAL RESTRUCTURING

Allergy to mergers, though, was not always Pentagon policy. In 1993, Defense Secretary William Perry told his famous "Last Supper" of defense industrialists that they would need to horizontally merge their firms to reduce fixed costs as military spending decreased. Not every deal would be equally appreciated, but the customer's interests would be heard. In 1994, a task force of the Defense Science Board, chaired by Georgetown University law professor Robert Pitofsky, argued for a meaningful role for the Defense Department in reviewing the resulting mergers.[12] In 1997, having assumed the chairmanship of the Federal Trade Commission, Pitofsky told the

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[9] *See* James R. Hines, Jr., *Three Sides of Harberger Triangles*, 13 J. ECON. PERSP. 167, 167-88 (1999) (discussing the historical development of efforts to calculate these rents).

[10] *See* Gordon Tullock, The Welfare Costs of Tariffs, Monopolies, and Theft, 5 WESTERN ECON. J. 224, 224-32 (1967) (identifying the economic concept first); *See* Anne Krueger in *The Political Economy of the Rent-Seeking Society*, 64 AM. ECON. REV. 291, 291-303 (1974) (labeling this concept as *rent-seeking*).

[11] *See generally* Timothy B. Lee, *Two Views of Innovation*, FORBES, (May 27, 2012), (giving a quick summary), https://www.forbes.com/sites/timothylee/2012/05/27/two-views-of-innovation/#3d78a6456a9e.

[12] ROBERT PITOFSKY ET AL., DEFENSE SCIENCE BOARD, ANTITRUST ASPECTS OF DEFENSE INDUSTRY CONSOLIDATION (1994).

Congress that the Pentagon's "views on the likely impact of a transaction are given great weight."[13]

The Pentagon, however, may not have been analytically prepared to deliver what the Federal Trade Comission or the Justice Department needed.[14] Perry, who had qualms about the post-Cold War restructuring as early as 1997, now believes that he "failed," finding that the conglomerate consolidations in particular were "unnecessary" and "undesirable," as the reductions he sought in the enterprise-wide overhead rates never materialized.[15] Some efficiencies were found at corporate headquarters, but only through ending production programs did plants actually close.[16] And yet, between 1992 and 1998, while military spending was declining, the enterprise value of publicly-traded defense contractors roughly doubled.[17]

After 1998, the Clinton administration generally halted mergers that would have reduced the Pentagon's supply base to duopoly.[18] In the 2000s, however, the Bush

administration resumed a light touch to merger reviews, at least with regard to Section 2 of the Sherman Antitrust Act, which governs anti-competitive combinations.[19] Notable was its endorsement in 2006 of the horizontal formation of United Launch Alliance (ULA), the merger-to-monopoly of the space booster businesses of Boeing and Lockheed Martin. The Federal Trade Commission demanded only that the resulting joint

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13 *Mergers and Acquisitions in the Defense Industry*, testimony before the Subcommittee on Acquisition and Technology of the United States Senate Armed Services Committee, Washington DC, 15 April 1997.

14 STEVEN GRUNDMAN, A RETROSPECTIVE ON CONSOLIDATION IN AEROSPACE & DEFENSE SINCE 1994, 9 (March 2001) (Unpublished white paper for the editors of Aviation Week & Space Technology). By long-standing but perhaps unusual arrangement, FTC and the Antitrust Division of the Justice Department split their merger review responsibilities by industrial code. Defense spans several in each agency's purview.

15 Jordana Mishory, *Former defense secretary warns against 'unintended consequences' from another 'Last Supper'*, INSIDE DEF., (Dec. 3, 2015), https://insidedefense.com/daily-news/former-defense-secretary-warns-against-unintended-consequences-another-last-supper. I thank Steven Grundman, former Deputy Under Secretary of Defense for Industrial Affairs and Installations, for his contemporaneous recollection. For another view from the end of that decade, with an emphasis on the domestic politics involved, *see* Eugene Gholz & Harvey M. Sapolsky, *Restructuring the U.S. Defense Industry*, 24 INT'L SECURITY 5, 5-51 (Winter 1999/2000).

16 SCOT A. ARNOLD ET AL., INFRASTRUCTURE RATIONALIZATION IN THE U.S. NAVAL SHIP INDUSTRIAL BASE, (Inst. for Def. Analysis ed., 2008).

17 Kevin Dehoff et al., *Managing a downturn: How the US defense industry can learn from its past*, MCKINSEY & CO., (Apr. 1, 2013), https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/managing-a-downturn.

18 Barry Watts, *The US Defense Industrial Base: Past, Present and Future*, CENTER FOR STRATEGIC & BUDGETARY ASSESSMENTS, 32 (2008).

19 Ronan P. Harty, *Federal Antitrust Enforcement Priorities under the Obama Administration*, 1 J. EUR. COMPETITION L. & PRAC. 52, 52 (2010).

venture not engage in vertical restraint against other companies' satellites.[20] Early in 2009, however, the Obama Administration signaled a sharp change in direction, and specifically regarding Section 2.[21] Enforcement varied considerably across industries, but in defense, the Pentagon once again indicated firm opposition to further consolidation amongst its largest suppliers.[22]

But in 2011, with spending on armaments again sliding, *National Defense* magazine breathlessly announced that "America's arms manufacturers [were] asking the Pentagon to step up and protect the industry from an imminent collapse."[23] Think- tankers at the CSBA called for a defense-industrial strategy to forestall further "erosion of design capabilities for military-unique products."[24] Investors wanted an orderly approach to further restructuring, to avoid another demise like that of Fairchild Republic, which never really recovered after building its last A-10 in 1984.[25] The firm Pentagon policy of opposing further consolidation amongst was dissuading much restructuring activity. As the Wall Street Journal mused, rumors of merger-mania had seemingly brought out the antitrust police.[26]

In 2015, Lockheed Martin's acquisition of Sikorsky indirectly challenged that policy. The European Commission easily approved the merger, as it found "no overlaps between the companies' activities".[27] But while Pentagon procurement chief Frank Kendall agreed that the deal did not "constitute a merger of two top-tier defense firms," and admitted no

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[20] FED. TRADE COMM., *FTC Intervenes in Formation of ULA Joint Venture by Boeing and Lockheed Martin*, (Oct. 3, 2006), https://www.ftc.gov/news-events/press-releases/2006/10/ftc-intervenes-formation-ula-joint-venture-boeing-and-lockheed. A vertical restraint is an agreement between firms to restrict trade at different levels of production or distribution. Once considered *per se* illegal under the Sherman and Clayton Antitrust Acts, American courts now generally apply a "rule of reason" to challenged arrangements.

[21] Harty, *supra* note 19, at 55.

[22] Peter Cook et al., *Pentagon Welcomes Mergers Except for Top Six Suppliers*, BLOOMBERG BUS., (Feb. 9, 2011), https://www.bloomberg.com/news/articles/2011-02-09/carter-says-pentagon-welcomes-mergers-spinoffs-within-limits.

[23] Sandra Irwin, *Managing the Defense Industry: Stalinism or Smart Business*? Nat.'l Def. (Nov. 1, 2011), https://www.nationaldefensemagazine.org/articles/2011/11/1/2011november-managing-the-defense-industry-stalinism-or-smart-business.

[24] Barry Watts & Todd Harrison, *Sustaining Critical Sectors of the U.S. Defense Industrial Base*, CENTER FOR STRATEGIC AND BUDGETARY ASSESSMENTS, xii (2011).

[25] I thank W. Alex Vacca of Northrop Grumman and Richard Aboulafia of the Teal Group for this insight.

[26] Jacob Gershman, *Merger-Mania Brings Out the Antitrust Police*, WALL ST. J. L. BLOG (Dec. 11, 2015, 4:08 PM), https://www.wsj.com/articles/BL-LB-52741.

[27] European Commission Press Release MEX/15/5857, Mergers: Commission clears acquisition of Sikorsky Aircraft by Lockheed Martin (Oct. 16, 2015).

basis in law to challenge it, he regretted it as "a further reduction in the number of weapon system prime contractors."[28]

Sheer size was another concern. In 2014, Lockheed Martin's revenues totaled $45.6 billion; with Sikorsky's $6.6 billion, the combined company would be 14% larger.[29] As Kendall later argued in a formal, on-the-record statement, "with size comes power, and the department's experience with large defense contractors is that they are not hesitant to use this power for corporate advantage."[30] The reality, however, was less clear. The Pentagon's dependence on its top ten suppliers is actually slightly lower today than in 1959, and on its top five only slightly higher.[31] After all, the entire U.S. economy has experienced considerable concentration in the past 20 years, resulting in greater corporate profits, but in some cases also increases in innovative product offerings.[32]

All the same, the surprise contained in Kendall's public reaction indicated a lack of interagency coordination between Justice and Defense on this important policy question. Some bankers believed that consolidation would likely continue, though particularly in professional services, which was more fragmented, and not subject to Kendall's "wrath".[33]

THE CHALLENGE OF REGULATORY CONTROL

Policymakers sometimes assume that the risks of industrial concentration are readily understandable, and that the costs can be contained with effective regulatory regimes. The government's

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28 Frank Kendall, Under Sec'y of Def. for Acquisition, Tech. & Logistics, U.S. Dep't of Def., Kendall's remarks at Defense One's State of DoD Acquisition event (Oct. 5, 2015) (discussing merger starts at the 58-minute mark which give more context to his remarks).

29 Doug Cameron, *Lockheed Martin to Buy Sikorsky for $9 Billion*, WALL ST. J., (July 20, 2015), https://www.wsj.com/articles/lockheed-agrees-to-buy-sikorsky-for-9-billion-1437392758.

30 Aaron Mehta & Andrew Clevenger, *Kendall Seeks Congressional Action Against Prime Mergers*,
DEF. NEWS (Sept. 30, 2015), http://pentagonbrief.blogspot.com/2015/10/kendall-seeks-congressional-action.html.

31 James Hasik, *Not hesitant to use this power for corporate advantage'—Just how politically problematic is concentration in the defense industry?* DEF. INDUSTRIALIST (Dec. 10, 2015), https://www.atlanticcouncil.org/content-series/defense-industrialist/not-hesitant-to-use-this-power-for-corporate-advantage/.

32 Theo Francis & Ryan Knutson, *Wave of Megadeals Tests Antitrust Limits in U.S.*, WALL ST. J. (Oct. 18, 2015), https://www.wsj.com/articles/wave-of-megadeals-tests-antitrust-limits-in-u-s-1445213306, (using a dataset from Gerard Hoberg and Gordon Phillips of the University of Southern California).

33 Marjorie Censer, *Bankers Say Defense Industry Consolidation Likely To Continue In 2016*, INSIDE DEF. (Oct. 9, 2015), https://insidedefense.com/daily-news/bankers-say-defense-industry-consolidation-likely-continue-2016.

monopsony, through its legal authority to prohibit any individual export of armaments, creates great buyer power. But the industry is already heavily regulated, and if the opportunities for control were so apparent, the Defense Department would not be so interested in *better* buying power.[34]

There are at least five reasons for suspicion about this power. To begin, *the regulatory burden itself* is costly, which contributes to the overall cost of monopoly. Then, the *appropriate regulatory mechanisms* are not obvious. Whether monopolists are regulated according to price or cost, their managers and labor forces can find ways of gaming the system to extract at least of portion of the rents they desire. Tightly-written government contracts are imperfect means of driving monopolists towards cost reductions or innovations. The *informational asymmetries* in regulation are serious, so the perspectives that regulators develop on their subjects are often distorted. *Regulatory capture* is also common, as regulators come to identify too closely with the firms they regulate. The problem is particularly severe in technologically-intensive industries, where by virtue of the domain knowledge required, the regulators must have experience with the industry.[35] Finally, when enforcement regimes look too far into costs, *regulatory fences* tend to chase commercially-minded entrants away from the business.[36]

PORTFOLIO POWER—THE ANTECEDENT OF THE GE/HONEYWELL CASE

Pentagon officials may dread such problems, but Kendall's recent objection concerning Sikorsky points at something old-but-new-again in the United States: a fear of simple size. To understand the economic, legal, and regulatory challenges in addressing those concerns, we can look to a related case from fifteen years ago, rejected not for horizontal or vertical issues, but its presumed future power as a sprawling conglomerate.

In October 2000, General Electric (GE) and Honeywell announced the "largest industrial merger in history," a proposed $42 billion deal. The former was the largest worldwide producer of jet engines; the latter was the

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34 *See* James Hasik, *Better Buying Power or Better Off Not? Purchasing Technical Data for Weapon Systems*, 21 DEF. ACQUISITION REV. J. 694, 695–96 (2014) (investigating one part of the problem).

35 *See* DANIEL CARPENTER & DAVID A. MOSS, PREVENTING REGULATORY CAPTURE: SPECIAL INTEREST INFLUENCE AND HOW TO LIMIT IT (2014) (giving recent ideas on how to prevent or at least manage the phenomenon); *See* Lawrence G. Baxter, *Understanding Regulatory Capture: An Academic Perspective from the United States*, *in* MAKING GOOD FINANCIAL REGULATION 31-39 (Stefano Pagliari ed. 2012) (explaining regulatory capture quickly and his story of how he came to love the Sarbanes-Oxley Act).

36 *See* DEPARTMENT OF DEFENSE, REPORT OF THE DEFENSE SCIENCE BOARD TASK FORCE ON ANTITRUST ASPECTS OF DEFENSE INDUSTRY CONSOLIDATION 27–28 (1994) (showing how the Pitofsky task force understood these problems).

"largest worldwide supplier of non-engine equipment" for aircraft.[37] The announcement broke up a pending merger between Honeywell and United Technologies Corporation (UTC), which owned both engine- maker Pratt & Whitney and helicopter-builder Sikorsky.[38] On 2 May 2001, the deal was approved by the Antitrust Division of the U.S. Justice Department. On 16 May 2001, the deal was approved by the Canadian Competition Bureau. On 3 July 2001, the deal was prohibited by the Merger Task Force of the European Commission.

The U.S. and E.U. agencies had coordinated their reviews extensively over several months, but reached very different conclusions.[39] The problem was that "divergent outcomes can result from divergent models of merger control."[40] At one time, U.S. merger law was about "diversity, freedom from coercion, and economic opportunity for players who lacked power." Since 1981, however, both law and policy have been concerned more strictly with guarding against inefficient price increases or foreclosures. Antitrust law and policy in the European Union remain concerned with preventing "domination."[41]

This generally produces the same rulings—except where mergers facilitate exclusionary practices *not* expected to lead to price increases. As an example, allowing two vertically linked monopolists to merge creates a more politically powerful monopolist, but can be economically efficient if it avoids the double marginalization problem.[42]

In the Commission's review, an ominous problem was *portfolio power*—the ability of the combined firm to engage in "foreclosure through packaged offers" across a range of inputs.[43] The theory held that GE and Honeywell would together hold half the global market for non-structural systems placed on airliners: engines, avionics, landing gear, brakes, blackboxes, *etc*. Indeed, enthusiasm for this investment thesis remains. In August 2017, rumors circulated that United Technologies and Rockwell

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37 Eleanor M. Fox, *Mergers in Global Markets: GE/Honeywell and the Future of Merger Control*, 23 U. PA. J. INT'L ECON. L. 457, 457 (2002).

38 Andrew Ross Sorkin & Claudia H. Deutsch, *General Electric Buying Honeywell in $45 Billion Deal, New York Times*, N.Y. TIMES (Oct. 23, 2000), https://www.nytimes.com/2000/10/23/business/general-electric-buying-honeywell-in-45-billion-deal.html.

39 Leigh M. Davison, *The GE/Honeywell Merger Controversy and the Path to Analytical Convergence in International Merger Assessment: A Critical Commentary*, 24 LIVERPOOL L. REV. 89, 91–92 (2002) (particularly citing a speech by Charles James to the Canadian Bar Association on "International Antitrust in the Bush Administration.").

40 Donna E. Patterson & Carl Shapiro, *Transatlantic Divergence in GE/Honeywell: Causes and Lessons*, ANTITRUST MAG., Fall 2001, at 24.

41 Fox, *supra* note 37, at 458.

42 *Id.* at 459, 464.

43 Patterson & Shapiro, *supra* note 40, at 18; *See* Robert J. Reynolds & Janusz A. Ordover, *Archimedean Leveraging and the GE/Honeywell Merger*, 70 ANTITRUST L. J. 171, 171-98 (2002) (defending the Commission's thinking).

Collins would be merging in a similar if smaller deal—just $20 billion.[44] The *Wall Street Journal's* "Heard on the Street" columnist waxed about the possibilities:

> *Imagine then a plane made with United Technologies' Pratt & Whitney engines, United Technologies landing gear and brakes, Rockwell Collins flight controls, drink carts, and toilets. If you are Boeing or Airbus, or an airline purchasing the finished product, you might think that the balance of power in the aerospace supply chain is tilting against you.*[45]

Curiously, though, neither Boeing nor Airbus lobbied against proposed merger in 2000, and portfolio power over the buyers may not then have been "the Commission's most intractable concern."[46] At the time, General Electrical Commercial Aviation Services (GECAS) was the lessor buying 10% of all new jetliners worldwide. While that share was not overwhelming, GECAS was one of the largest buyers. The Commission considered this enough to tip the balance of Airbus and Boeing's future aircraft design decisions through "Archimedean leveraging."[47] As the argument went, the two would then respect GECAS's buying power, and include GE/Honeywell equipment as options on all new designs. The bundling might actually decrease prices, and then pass-through costs for airlines, as the combination would not have been enough to drive competitors like Rolls Royce and United Technologies from the market. It certainly could have suppressed their margins—and consultants hired by those firms supplied the economic models on which the Commission relied in making its decision.[48]

The obvious remedy was spinning off GECAS, but in an indication of its conglomerate value, GE simply would not agree.[49] In the end, the Commission considered that the combined firm would have been "simply too influential in the aircraft engines and systems businesses."[50] But dominating a market with uncertain technological trajectories, like jet engines, is much harder than assumed. Pratt & Whitney was only

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[44] Dana Mattioli et al., *Aerospace Firms Close In on Deal*, WALL STREET J. (Aug. 30, 2017), https://www.foxbusiness.com/features/aerospace-firms-close-in-on-deal-wsj.

[45] Alex Frangos, *Rockwell Deal Too Pricey to Fly*, WALL STREET J. (Aug. 8 2017) https://www.wsj.com/articles/united-technologies-rockwell-collins-deal-too-expensive-to-fly-1502124619.

[46] Holland, *supra* note 1, at 87.

[47] Ricky D. Rivers, *General Electric/Honeywell Merger: European Commission Antitrust Decision Strikes a Sour Note*, 9 ILSA J. INT'L & COMP. L. 525, 527 (2003).

[48] Patterson & Shapiro, *supra* note 40, at 26.

[49] Holland, *supra* note 1, at 87.

[50] *Welch Squelched,* ECONOMIST (June 21, 2001) https://www.economist.com/business/2001/06/21/welch-squelched.

discomfited because of its earlier downfall from the even greater dominance it had achieved in the 1960s and 1970s.[51]

CONGLOMERATE VALUE, AND THE CHALLENGE OF PENTAGON CONTROL

The Commission's fears of the power of a combined GE-Honeywell parallel those at which Kendall hinted. Some of the concern may have been vertical: Lockheed's avionics businesses could readily influence design decisions for Sikorsky, and thus for its loyal customers in the U.S. Army and Navy. Some of the objection was clearly conglomerate. A bigger Lockheed would control more of the Pentagon's overall purchasing, making it more difficult to oppose politically. On one level, this may be, as Patterson and Shapiro characterized the arguments against GE/Honeywell, "dangerously close to the old, discredited 'Big Is Bad' doctrine from the 1960s."[52] Some of this latter objection has been obviated by the company's $5 billion sale of its IT services arm to Leidos. Through that horizontal merger, the combined company will now have the largest share of the Pentagon's purchasing from its sector.[53] The achieved scale, however, may be not so obviously beneficial. In the four weeks after the deal was announced, the price of shares in Leidos fell by 22%.[54] Even in the absence of analysis by regulators, the market may signal all on its own that Big Is at least sometimes Questionable.

All the same, portfolio leverage over a monopsonistic government with its own portfolio of purchasing is not much countenanced in antitrust jurisprudence. As noted, apart from Kendall's complaint, it is otherwise unheard from the United States government. It is now far less common in Europe as well. The 2002 AirTours/First Choice case before the European Court of First Instance rather raised the standard of proof for the Commission.[55] But the European system remains fundamentally regulatory, with an appeals process so long that it is effectively unavailable for business combinations.[56] On the other hand, this European bureaucratic fiat

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51 Philipp Schumacher, *The EU's Flawed Assessment of Horizontal Aspects in GE/Honeywell: Revising the Last Pillar of the European Prohibition Decision*, 35 EUR. J. L. & ECON. 211, 211-240 (2013).

52 Patterson & Shapiro, *supra* note 40, at 20.

53 Loren Thompson, *Leidos-Lockheed IT Merger Fashions Federal Services Powerhouse*, FORBES (Jan. 26, 2016) https://www.forbes.com/sites/lorenthompson/2016/01/26/leidos-lockheed-it-merger-fashions-federal-services-powerhouse/#418122937177.

54 BYRON CALLAN, A LULL IN POSITIVE DEFENSE CATALYSTS. CRUZ PLAN IMPLIES DOD BUDGET OF +$700 BILLION, (Capital Alpha Partners, research note, Feb. 22, 2015).

55 Fox, *supra* note 37, at 465.

56 Jeremy Grant & David J. Niven, *The Attempted Merger Between General Electric and Honeywell: A Case Study in Transatlantic Conflict*, 1 JOURNAL OF COMPETITION LAW AND ECONOMICS 595, 627 (2005).

is thus "arguably more conducive than the American to regulators negotiating creative remedies for mergers whose effect on competition is unclear or especially speculative."[57]

Lockheed's interest in the deal was unsurprising, given its "long-standing work on Sikorsky platforms, including the SH-60 program and now Presidential Helicopter and Combat Rescue Helicopter."[58] The foremost reason may have been the opportunity for vertical integration. As a prime contractor, Lockheed had failed with at least two aircraft integration programs—its earlier presidential transport effort with Agusta-Westland, and its Airborne Common Sensor with Embraer—substantially because the company's electronics people would not or could not leverage the experience of its aircraft people.[59] With Sikorsky inside Lockheed, the combined entity could now find the vertical informational advantages needed to avoid such problems.[60] But the conglomerate benefits of market access may have played a role as well. As Sam Mehta, president of Sikorsky's defense division, commented at the 2016 Singapore Airshow, "there are customers that both companies had a very strong relationship with, such as the U.S., but beyond this we've made some connections with international customers."[61] Whether or not Sikorsky could have entered these arenas working from within the conglomerate United Technologies, it did not.

Moreover, Lockheed stands not alone with its investment thesis. The six largest helicopter manufacturers worldwide are all component companies of larger concerns. In addition to Airbus Helicopters and Boeing Rotorcraft, the list includes AgustaWestland in Leonardo, Bell in Textron, Russian Helicopters in Oboronprom, and Sikorsky—whether in United Technologies or Lockheed. Textron in particular extols the virtues of its *multi- industrial* activities. The firm eschews the term conglomerate for its negative connotations, and specifically emphasizes its participation in civil markets, for "the ability to share talent, technology and channels."[62] This

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57 Holland, *supra* note 1, at 79.

58 BYRON CALLAN, SIKORSKY ISSUES: PRICE, BALANCE OF POWER AND LMT STRATEGY, (Capital Alpha Partners, research note, May 20, 2015).

59 *See* Jonathan Karp, *As It Adapts to Information Age, Lockheed Fumbles Key Project*, WALL STREET J. (Jan. 26, 2006) (reporting on the ACS project), https://www.wsj.com/articles/SB113824558144256737.

60 James Hasik, *Selling Sikorsky: Should structure or conduct drive the Pentagon's supply strategy?*, DEF. INDUSTRIALIST (June 24, 2015), https://www.atlanticcouncil.org/content-series/defense-industrialist/selling-sikorsky/.

61 Greg Waldron, *Singapore: Lockheed, Sikorsky unlock new opportunities*, FLIGHT GLOBAL (Feb. 17, 2016) https://www.flightglobal.com/helicopters/singapore-lockheed-sikorsky-unlock-new-opportunities/119683.article.

62 Ellen Lord, *A View of Defense from Inside a Multi-Industrial Company, Captains of Industry lecture series*, ATLANTIC COUNCIL (Jan. 15, 2014),

view is substantially out-of-fashion amongst economists, but it deserves the continuing test amongst investors and industrialists—those whose money is on the line.

Indeed, one's esteem for regulatory efficacy "boils down to whether you trust the agencies or the stock market," and as Bruce Kobayashi once continued, "I'll take the stock market any day."[63] Kobayashi, a former economist at the Antitrust Division of the Justice Department, and now associate dean at George Mason University Law School, was commenting on the rejected Staples-Office Depot merger proposal—in 1997. In 2016, Staples and Office Depot tried again, but this time with better success in Brussels than in Washington.[64] Like market shares and technological trajectories, regulatory regimes are not wholly stable over time.

So how can the government weigh the benefits against the costs in such deals? Whatever his views, Kendall's understanding of the industry and his agency were well grounded in decades of experience. Less qualified secretaries may suffer from bureaucratic capture, in which civil servants exceed their legal mandates to attain their own policy goals. After all, "the view of antitrust authorities as omniscient and benevolent agents seeking the public good has long been dismissed."[65] If the Defense Department is allowed to block mergers for their affects on national security, the standards and processes chosen for reviewing the deals must be carefully designed.[66]

Tackling portfolio questions also requires more complicated, interdisciplinary models than long-validated price-theoretic ones.[67] Today, however, the analytical capacities of Pentagon's industrial policy office rather pale before those of the Justice Department and the Federal Trade

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https://www.atlanticcouncil.org/commentary/transcript/transcript-view-of-defense-from-inside-a-multi-industrial-company/.

[63] Ed Brown, *Why the FTC Needs to Chill the Passion and the Drama of the Office-Supply Business,* FORTUNE (April 14, 1997) https://archive.fortune.com/magazines/fortune/fortune_archive/1997/04/14/224986/index.htm.

[64] *See* Chad Bray, *Staples-Office Depot Merger Approved in Europe, With Concessions*, N. Y. TIMES (Feb. 10, 2016), https://www.nytimes.com/2016/02/11/business/dealbook/staples-office-depot-merger-approved-in-europe-with-concessions.html#:~:text=Staples%2DOffice%20Depot%20Merger%20Approved%20in%20Europe%2C%20With%20Concessions,-By%20Chad%20Bray&text=LONDON%20%E2%80%94%20The%20European%20Commission%20said,Europe%20to%20ease%20competition%20concerns.

[65] Grant & Niven, *supra* note 56, at 600.

[66] Jeffrey P. Bialos, *Legal Alert: New Defense Department Guidance on Mergers and Acquisitions*, SUTHERLAND ASBILL & BRENNAN LLP (Oct. 8 2015), https://us.eversheds-sutherland.com/NewsCommentary/Legal-Alerts/178618/Legal-Alert-New-Defense-Department-Guidance-on-Mergers-and-Acquisitions.

[67] Gregory T. Gundlach et al., *Antitrust and Marketing: A Primer and Call to Research*, 22 J. PUB. POL'Y & MARKETING 232, 232–236 (2002).

Commission.[68] In the end, these offices controlled the interagency process, promulgating a "joint statement" in April 2016 on their mutual finding that existing policy and authorities in law were "sufficiently flexible" to manage further mergers amongst defense contractors.[69] Kendall himself subsequently acknowledged that he had been "persuaded" as well, and the matter seemed dropped.[70]

CRITERIA FOR ACCEPTING CONGLOMERATION

All the same, the joint statement may not last as the last word. If not, considering both the problematic alternatives and the challenges of regulation, I propose three questions to ask in reviewing conglomerate mergers that do not otherwise pose problems of pricing power or foreclosure for the Defense Department. The government should want to know whether the plausible benefits of the merging parties' specific *multi-industrial* thesis match the plausible costs to its buying power and political latitude.

Does overall size confer power in single markets? Kendall's thesis on size conferring power is not accepted universally, but resonates popularly. The near duopoly in American military shipbuilding suggests a useful set of tests. Does Newport News Shipbuilding influence American military policy more or less than Electric Boat (EB)? Does its parent Huntington-Ingalls Industries (HII) influence policy more or less than EB's parent, General Dynamics (GD) Marine Systems? And critically, as GD Marine is conglomerated into a larger entity, does the whole of GD hold greater sway over *shipbuilding* policy than the smaller and more focused HII?

Does overall size confer political power overall? Continuing the example, has GD successfully shaped military choices in related markets to defend its shipbuilding and repair franchises in Electric Boat, the Bath Iron Works, or National Steel & Shipbuilding? American regulators might take a long look at European national champions. Has, for example, BAE Systems' sometimes dominance of the British defense industry shaped the British government's choices in procurement across its portfolio? If so, at what point could similar effects be achieved by companies in the United States?

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[68] Conversation with Steven Grundman, former deputy assistant secretary of defense for industrial affairs and installations (Feb. 19, 2016)

[69] Press Release, FTC, DOJ Issue Joint Statement on Preserving Competition in the Defense Industry (Apr. 12, 2016), https://www.ftc.gov/news-events/press-releases/2016/04/ftc-doj-issue-joint-statement-preserving-competition-defense.

[70] Aaron Mehta, *Kendall Drops Legislative Merger Restriction Push*, DEFENSE NEWS (May 10, 2016), https://www.defensenews.com/pentagon/2016/05/10/kendall-drops-legislative-merger-restriction-push/.

Does vertical ownership confer informational benefits? Across the American economy, vertical ownership does not necessarily mean vertically integration—only half of such firms are shipping finished goods from their upstream units to their downstream ones.[71] Rather than suspecting all vertical combinations as geared for vertical restraint, policymakers might respect managerial needs to understand capabilities deep in their supply chains by pulling some assets within their corporate walls.

As supporting analyses, the government will want to ask whether the clock-cycles of innovation in the affected industries are long or short, and whether the future technological trajectories are more or less certain. In answering these questions, officials should consider how corporate conglomerations will institutionalize ideas about warfare in industry, and what possibilities for force structure will result.[72] None of these inquiries can rely on the statistical models routinely applied to horizontal or vertical merger cases in civil markets. Rather, the old case-intensive, structure–conduct–performance model of industrial organization may be worth reconsideration.[73] Then, in examining any specific merger, the government should ask not whether the favorable argument is concrete, but whether it is plausible. Most of the knowledge about how industry functions is simply not observable by outsiders.[74] In choosing which mergers will gain their blessing, regulators should understand that long-term relationships must *ex post* indicate a reasonable return, or industrialists with existing capabilities will lack *ex ante* incentive to invest in new assets.[75]

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[71] Enghin Atalay, etal., *Vertical Integration and Input Flows*, 104 AM. ECON. REV. 1120, 1120–48 (2014).

[72] Giovanni Dosi, *Technological paradigms and technological trajectories: A suggested interpretation of the determinants and directions of technical change*, 11 RES. POL'Y 147, 147-162 (June 1982) (describing Kuhn's idea of paradigms is useful here); *See* THOMAS S. KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS (1962).

[73] *See* JOE S. BAIN, INDUSTRIAL ORGANIZATION (1959) (giving the original exposition); *See* John Stuckey, *Enduring Ideas: The SCP Framework*, MCKINSEY Q. (July 1, 2008) (giving a contemporary summary applied to corporate strategy), https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/enduring-ideas-the-scp-framework.

[74] *See* Friedrich A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519, 519–530 (1945) (describing the classic view).

[75] Oliver E. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 AM. ECON. REV. 519, 519-540 (1983).

MISLEADING OMISSIONS: A BAYESIAN FRAMEWORK

*J. B. Heaton**

1 INTRODUCTION

Most people understand the idea of lying by omission.[1] In the legal context, many United States jurisdictions recognize different forms of claims for fraudulent omission. Fraudulent omission differs from fraudulent misstatement because it involves the concealment of a material fact rather than an affirmative misrepresentation.[2] Unlike a claim for fraudulent misstatement, a claim for fraudulent omission requires that the one who omitted the material fact had some duty to disclose it.[3] That duty can arise in a number of ways. Under New York law, for example, a party to a business transaction has a duty to disclose an omitted fact where: (1) "the [other] party has made a partial or ambiguous statement, on the theory that once a party has undertaken to mention a relevant fact to the other party it cannot give only half of the truth"; (2) "the parties stand in a fiduciary or confidential relationship with each other"; or (3) "one party possesses superior knowledge, not readily available to the other, and knows that the other is acting on the basis of mistaken knowledge."[4] Liability for omissions of fact can also arise when one offers an opinion knowing facts "that rebut the recipient's predictable inference."[5]

I present here a Bayesian framework for understanding misleading omissions.[6] Bayes' Theorem provides a simple framework for understanding

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[1] One legal commentator has reviewed evidence and argues that "[r]esearch suggests that lying by omission may be the most prevalent form of deception." Timothy T. Lau, *Reliability of Present State Impression Hearsay Evidence*, 52 GONZ. L. REV. 175, 192 (2017).

[2] Grand Union Supermarkets of the Virgin Islands, Inc. v. Lockhart Realty Inc., 493 F. App'x 248, 254-55
(3d Cir. 2012)("It is generally understood that tortious nondisclosure is a fraud claim based on an omission rather than an affirmative misstatement.") (citations omitted).

[3] As put by the securities law professors Sale and Langevoort: "Materiality notwithstanding, there is no automatic duty to disclose wrongdoing or legal risk." Hillary A. Sale & Donald C. Langevoort, *"We Believe": Omnicare, Legal Risk Disclosure and Corporate Governance*, 66 DUKE L.J. 763, 774 (2016).

[4] Harbinger Capital Partners LLC v. Deere & Co., 632 F. App'x 653, 656 (2d Cir. 2015) (internal quotations omitted).

[5] Omnicare, Inc. v. Laborers Dist. Council Const. Indust. Pension Fund, 135 S. Ct. 1318, 1331 (2015) (comparing liability for omissions in an opinion under Section 11 of the Securities Act with liability under Statement (Second) of Torts Section 539 (1976)).

[6] A useful collection of papers on Bayesian methods similar to that used here can be found in Frank Zenker, *Bayesian Argumentation: The Practical Side of Probability*, 1, 7-14 (2013). Bayes' Theorem has a controversial history in legal scholarship, mainly as to the role it should play in deciding cases. *See* Michael O. Finkelstein & William B. Fairley, *A Bayesian Approach to Identification Evidence*, 83 HARV. L. REV. 489, 490, 516-17 (1970); Laurence H. Tribe, *Trial by Mathematics:*

statements like "partial or ambiguous statement," "half of the truth," "mistaken knowledge," and facts "that rebut the recipient's predictable inference," especially in the context of opinions.

Suppose, for example, that a corporate officer made (and believes) the statement, "Based on facts known to me, I believe our conduct is lawful."[7] Suppose that the facts known include the fact that the company had not consulted any lawyer to evaluate the company's conduct.[8] Or suppose that while the corporate officer believes his statement, the facts known to him include that the company's lawyers believe otherwise and that the government is investigating the lawfulness of the company's conduct on suspicion it is not lawful.[9] Intuition tells us that the corporate officer's statement is somehow misleading. But why? As to the first possibility, we might say something like: "Well, the corporate officer might believe that the company's conduct is lawful based on the facts known to him, but I sure would like to have known the company hadn't actually had a lawyer evaluate that conduct." As to the possibility of the company's lawyers' adverse view of the lawfulness of the conduct and the government investigation, we might say: "Shouldn't the officer also have said that the company's lawyers have deep concerns[10] or is under investigation, whatever his own beliefs are?" But why, especially since we assume that the speaking corporate officer really does believe his statement?

Bayes' Theorem helps us understand why the statement is misleading given these other facts, because it allows us to decompose the statement into component parts and then analyze those components. For example, when no lawyer actually conducted an evaluation of the company's conduct, we will see that, not surprisingly, the "facts known to me" have almost no relevance to the statement "our conduct is lawful." The corporate officer's statement, even though believed by the corporate officer, is based almost entirely on the corporate officer's "general" or "prior" beliefs about the probability of the company's conduct being unlawful regardless of these specific facts

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Precision and Ritual in the Legal Process, 84 HARV. L. REV. 1329, 1331, 1338, 1393 (1971). Bernard Robertson & G. A. Vignaux, *Probability – The Logic of Law*, 13 OXF. J. LEG. STUD. 457, 458 (1993) is an excellent overview of probability in law, including Bayes' Theorem. Richard A. Posner, *An Economic Approach to the Law of Evidence*, 51 STAN. L. REV. 1477, 1479 (1999) analyzes the law of evidence through a Bayesian lens. Leading scholars today are increasing exploring the role that Bayes' Theorem can play in analyzing important evidentiary issues like that analyzed here. *See*, for example, Ian Ayres & Barry Nalebuff, *The Rule of Probabilities: A Practical Approach for Applying Bayes' Rule to the Analysis of DNA Evidence*, 67 STAN. L. REV. 1447, 1451-52 (2015); Kristy L. Fields, *Towards a Bayesian Analysis of Recanted Eyewitness Identification Testimony*, N.Y.U. L. REV. 1769, 1771-72 (2013); Yair Listokin, *Bayesian Contractual Interpretation*, 39 J. LEGAL STUD. 359, 360 (2010).

[7] *Compare Omnicare*, 135 S. Ct. at 1328-30.

[8] *Id.*

[9] *Id.*

[10] We set aside the problem of waiving attorney-client privilege, but it would be an issue in this example.

known to him. In the case where the corporate officer knows that the company's lawyers believe the company's conduct is unlawful and knows the government suspects the conduct is unlawful, we will see that the corporate officer's prior opinion about the likelihood of the lawfulness of the company's conduct is even more important to his views, since the facts of the company lawyers' opinions and the government's investigation with suspicion of wrongdoing are much less likely to exist if the company's conduct is lawful. We will sort out the elementary math of all this below—just an application of Bayes' Theorem—and doing so will help us understand better what makes statements like these misleading.

After describing the Bayesian framework, we will return to this example, which, as the footnotes describe, comes from discussion in the 2015 opinion of the United States Supreme Court in the *Omnicare* case. The Bayesian framework has straightforward application to securities cases like *Omnicare*. The framework extends to other commercial cases as well, and to cases of consumer fraud and similar claims. I illustrate this with an application to the misrepresentation of the addictive nature of a product, with reference to recent opioid litigation and potentially misleading omissions about addictiveness.

Section 2 sets out Bayes' Theorem in its most basic form, then reinterprets the corporate officer example in that framework. Section 3 presents an application to recent opioid litigation. Section 4 concludes.

2 THE BAYESIAN FRAMEWORK

2.1 A Gentle Introduction to Bayes' Theorem

Bayes' Theorem is a straightforward implication of joint probability, the probability that two things will happen together. Let A and B denote two "things"[11] of some sort. The joint probability of A and B is denoted P (A, B), and is simply the probability, P (.), that both A and B are, exist, or are true. If you imagine a Venn diagram of the probability of all possible things, P (A, B) is the probability intersection of thing A and thing B.

Basic probability theory shows that we can rewrite the joint probability of two things occurring as the probability of one of them existing given that the other one exists, times the probability the other one exists. That is, P (A, B) = P (A|B) P (B), where P (. |.) is a "conditional probability" in the sense that it is a probability of the first thing "conditional" or "given that" the second thing (the thing after the vertical bar in the parentheses) exists. P (B) is the probability of B existing across all scenarios, whether or not A

[11] I use "things" here intentionally. It is not necessary to use the jargon of probability theory to understand the gist of Bayes' Theorem in this context.

exists as well. Thus, the probability of A and B existing together can be viewed as asking, first, what is the probability of B happening, P (B), and then, if B exists, what is the probability of A existing, multiplying those probabilities together since both have to happen.

Of course, we can easily switch A and B and it all remains true. That is, P (A, B) = P (A|B) P (B) = P (B|A) P (A). Bayes' Theorem is nothing more than taking these two equivalent ways to express P (A, B): P (A|B) P (B) and P (B|A) P (A), and dividing out one of the P (.) terms (here we'll use P (B)) to give:

$$P(A|B) = \frac{P(B\ A)\ P(A)}{P(B).}$$

That's Bayes' Theorem: the probability of A given B is the probability of B given A times the probability of A, divided by the probability of B.

2.2 Changing the Labels for Omnicare

What does this have to do with misleading omissions? Remember our example based on the discussion in *Omnicare*: "Based on facts known to me, I believe our conduct is lawful." We change A to "lawful conduct" and B to "facts I know." We can then interpret "lawful conduct|facts I know" as A|B. Probability can be interpreted (and has a long history of being interpreted)[12] as a degree or an amount of subjective belief.[13] Thus, we can interpret P (.) as the degree of belief in the truth of the thing inside the parentheses. Putting it together, we can interpret the statement "Based on facts known to me, I believe our conduct is lawful" as:

$$P(\text{lawful conduct}|\text{facts I know}) > P^* \quad (1)$$

where P (.) denotes probability as a degree of belief and P * is some threshold above which the belief should be held (unless some specific

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[12] *See generally* Ward Edwards, Harold Lindman & Leonard J. Savage, *Bayesian Statistical Inference for Psychological Research*, 70 PSYCHOL. REV. 193, 194 (1963) (The earliest exposition of such an interpretation may be found in F. P. Ramsey, *Truth and Probability*, *in* 7 THE FOUNDATIONS OF MATHEMATICS AND OTHER LOGICAL ESSAYS 156-198, (R. B. Braithwaite ed., 1999), though de Finetti's two works around the same time (Bruno de Finetti, *Fondamenti Logici del Ragionamento Probabilistico* [*Logical Foundations of Probabilistic Reasoning*], 9 BOLLETTINO DELL'UNIONE MATEMATICA ITALIANA 258 (1930); Bruno de Finetti, *La Prévision: Ses Lois Logiques, Ses Sources Subjectives* [*Forecasting: Its Logical Laws, Its Subjective Sources*], 7 ANNALES DE L'INSTITUT HENRI POINCARÉ 1, (1937)) was pathbreaking as well. De Finetti's 1974 book, BRUNO DE FINETTI, THEORY OF PROBABILITY: A CRITICAL INTRODUCTORY TREATMENT (1974), is an English-language presentation of his influential views on subjective probability.

[13] *See generally* Edwards, Lindman & Savage, *supra* note 12. This work remains a timeless introduction to the basics of probability as subjective belief.

quantification like "there's a 30% chance" is given) to justify the unqualified statement "I believe [something]." For example, we might think of $P^* = .50$ so that a person is entitled to say "I believe x" if $P(x) > 0.5$, that is, if the person believes that x is more likely than not.

We know from above that Bayes' Theorem allows us to reformulate the statement

$$P\,(\text{lawful conduct}|\text{facts I know}) \quad (2)$$

into an equivalent representation:

$$\frac{P\,(\textit{facts I know lawful conduct})P\,(\textit{lawful conduct})}{P\,(\textit{facts I know}).}$$

2.3 Analyzing the Omnicare Example

We can now return to our earlier fact assumptions and evaluate them in terms of Bayes' Theorem. Suppose one of the facts known to the speaking corporate officer is that the company had not consulted any lawyer to evaluate the lawfulness of the company's conduct. That seems to make the corporate officer's statement a "partial or ambiguous statement," "half of the truth," create "mistaken knowledge," or be a fact that "rebuts the recipient's predictable inference." Perhaps this is because the statement implies to a listener that there are facts the corporate officer knows that are important to his belief. Bayes' Theorem allows us to see why the corporate officer's statement is misleading.

Look at the term P (facts I know|lawful conduct). In this example, where the facts known to the corporate officer do not include any facts about any lawyer's evaluation of the lawfulness of the company's conduct, that the conduct is lawful has no obvious relationship to the facts known to the corporate officer. That is, the assumption of lawful conduct as a given may have no tendency to make the facts known to the corporate officer any more or less probable. That means that P (facts I know|lawful conduct) may be about the same as P (facts I know), a probability that is not conditional on lawful conduct. But if

$$P\,(\text{facts I know}|\text{lawful conduct}) \approx P\,(\text{facts I know}), \ (4)$$

it follows, because the above terms more or less drop out of the Bayesian reformulation, that we are left with

$$P\,(\text{lawful conduct}|\text{facts I know}) \approx P\,(\text{lawful conduct}), \ (5)$$

Which is to say that the corporate officer's opinion about the lawfulness of the company's conduct is essentially independent of the facts he knows, and

is based almost entirely on what Bayesian analysts call his "prior" opinion, a belief independent of the facts he has implied are backing it up. It would have been more accurate—perhaps accurate enough not to be misleading—for him to have said, "I don't really know any facts that bear on the issue, but I just think that we are the kind of company whose conduct would be lawful if it were evaluated by a lawyer to see if it was." This becomes clearer when we consider not an absence of any inquiry by a lawyer to evaluate the lawfulness of the company's conduct, but actual knowledge by the corporate officer of facts that make lawful conduct much less likely than unlawful conduct. Suppose the corporate officer knows that the company's lawyers have evaluated the company's conduct and believe it is unlawful and that the government simultaneously is investigating the lawfulness of the company's conduct on suspicion that it is unlawful.

Now look at the probability, P (facts I know|lawful conduct). This next point is key to understanding the Bayesian view: if the company's conduct actually is lawful—something we need not yet know—then these facts known to the corporate officer—i.e., that his company's lawyers believe the conduct is unlawful and that there is a government investigation ongoing on suspicion of wrongdoing—are much less likely than if the company's conduct is unlawful.

That is,

$$P\ (\text{facts I know}|\text{lawful conduct}) \ll P\ (\text{facts I know}|\text{unlawful conduct}). \quad (6)$$

We can think in terms of frequencies to aid intuition on this important point: the facts of lawyers who believe the company is engaged in unlawful conduct when a government investigation is ongoing are much more likely to occur at companies where conduct is unlawful than at companies where conduct is lawful. This implies that the following part of our reformulation,

$$\frac{P\ (\textit{facts I know}\,|\,\textit{lawful conduct})}{P\ (\textit{facts I know})} \quad (7)$$

is small, which requires an even more important role for the corporate officer's prior opinion to override this effect. It would have been more accurate—again, perhaps accurate enough not to be misleading—for him to have said, "I know some pretty bad facts that would be much more likely to be true if our company's conduct is unlawful than if it is lawful, but I really think that we are the kind of company whose conduct is lawful regardless of any particular facts like those pretty bad ones I know." But by saying, "Based on facts known to me, I believe our conduct is lawful," the corporate officer made a statement that ends up being literally true in a very misleading way. P (lawful conduct|facts I know) may be high only because, although P (facts I know|lawful conduct)/P (facts I know) is very small, the term, P (lawful conduct), the corporate officer's prior belief, is very large.

2.4 A Numerical Example

Suppose

$$P\,(\text{facts I know}|\text{lawful conduct}) = 0.20$$
$$P\,(\text{lawful conduct}) = 0.90 \text{ and}$$
$$P\,(\text{facts I know}) = 0.30.$$

Then, applying Bayes' Theorem,

$$P\,(\text{lawful conduct}|\text{facts I know}) = 0.60,$$

which is greater than our assumed threshold of 0.50, even as the statement hides highly material facts.

3 APPLICATION: OPIOID LITIGATION AND ADDICTIVENESS

The securities context of the *Omnicare* case is a natural place to apply the Bayesian view outlined here. But the framework has broader application. Consider statements about the addictive nature of opioids. The opioid crisis is a tremendous and tragic problem.[14] It also has set off a wave of litigation, including claims that manufacturers of prescription opioid medications "overstated the benefits and downplayed the risks of the use of their opioids and aggressively marketed (directly and through key opinion leaders) these drugs to physicians[.]"[15]

Suppose a manufacturer of prescription opioid medications says "We believe that taken as prescribed, opioids aren't addictive." Put in terms of our framework above, we can reformulate this as

$$P\,(\text{opioids aren't addictive}|\text{taken as prescribed}) > P \quad (8)$$

Bayes' Theorem allows us to reformulate the statement

$$P\,(\text{opioids aren't addictive}|\text{taken as prescribed}) \quad (9)$$

into an equivalent representation:

$$\frac{P\,(\text{taken as prescribed}|\text{opioids aren't addictive})\; P\,(\text{opioids aren't addictive})}{P\,(\text{taken as prescribed}).} \quad (10)$$

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[14] *See generally* Julie Bosman, *Inside a Killer Drug Epidemic: A Look at America's Opioid Crisis*, N.Y. TIMES, (Jan. 1, 2017), https://www.nytimes.com/2017/01/06/us/opioid-crisis-epidemic.html?smid=pl-share.

[15] In re Nat'l Prescription Opiate Litig., 290 F.Supp.3d 1375, 1378 (J.P.M.L. 2017).

There are a number of ways the statement

$$P\text{ (opioids aren't addictive}|\text{taken as prescribed)} \quad (11)$$

can be false or misleading. Most importantly, of course, the manufacturer of prescription opioid medications may simply not believe it. That is, it could be that

$$P\text{ (opioids aren't addictive}|\text{taken as prescribed)} \ll P^{*} \quad (12)$$

That is the easy case, and not our concern here. But suppose the statement is viewed as an opinion and that it is either true or difficult to prove false. Does that mean it is not misleading? The answer may be no, and the Bayesian framework helps analyze why.

Consider the term P (taken as prescribed|opiods aren't addictive). This term could be fairly large, all else equal. If opioids do not pose a material risk of addiction, but they relieve chronic severe pain, then it is much more likely that opioids are taken as prescribed and not overused. That is likely true even though there are other side effects, like constipation.[16]

Now consider the term P (opioids aren't addictive). We said above that

$$P\text{ (taken as prescribed}|\text{opioids aren't addictive)} \quad (13)$$

may be high. But that may be misleading if, although opioids would be taken as prescribed so long as they aren't addictive, the probability that they aren't addictive is low.

Finally, consider the term P (taken as prescribed). Across all drugs, some patients comply with prescriptions and some don't, and there are many reasons why.[17] There may be a much lower probability of taking medications as prescribed in general than taking medications as prescribed given they aren't addictive and relieve chronic severe pain. We may therefore end up again with a statement that is misleading in the sense that

$$P\text{ (opioids aren't addictive}|\text{taken as prescribed)} \quad (14)$$

may be high, but only because

$$P\text{ (taken as prescribed}|\text{opioids aren't addictive)} \quad (15)$$

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[16] *See generally* Alfred D. Nelson & Michael Camilleri, *Opioid-Induced Constipation: Advances and Clinical Guidance*, 7 THERAPEUTIC ADVANCES CHRONIC DISEASE 121, 121-134 (2016).

[17] *See generally* Jing Jin ET AL., *Factors Affecting Therapeutic Compliance: A Review from the Patient's Perspective*, 4 THERAPEUTICS & CLINICAL RISK MGMT., 269, 269-86 (2008).

Is large, which is misleading because

$$P\ (\text{opioids aren't addictive})\quad(16)$$

Is low, and

$$P\ (\text{taken as prescribed})\quad(17)$$

may also be low relative to P (taken as prescribed|opioids aren't addictive).

It would have been more accurate—again, perhaps accurate enough not to be misleading—for the manufacturer of prescription opioid medications to have said, "We believe that if opioids are taken as prescribed, then opioids aren't addictive, but you probably should know that a lot of people don't take them as prescribed and they likely are quite addictive."

3.1 A Numerical Example

Suppose

$$P\ (\text{taken as prescribed}|\text{opioids aren't addictive}) = 0.90$$
$$P\ (\text{opioids aren't addictive}) = 0.15/\text{and}$$
$$P\ (\text{taken as prescribed}) = 0.25.$$

Then, applying Bayes' Theorem

$$P\ (\text{opioids aren't addictive}|\text{taken as prescribed}) = 0.54,$$

which is greater than our assumed threshold of 0.50, even as the statement hides highly material facts.

4 CONCLUSION

"Deception is part of our everyday interactions; it surrounds us in the form of social niceties, misleading statements, wishful thinking, exaggerations, concealment, and flat untruths."[18] Omissions are of considerable interest in the law as well, and the 2015 opinion of the United States Supreme Court in *Omnicare*, a securities case, and other high stakes litigation surrounding misleading omissions, have raised the stakes of better understanding what makes a statement misleading by omission. Bayes' Theorem is a useful structure, especially in the context of opinions for better understanding otherwise loose concepts like "partial or ambiguous statement," "half of the truth," "mistaken knowledge," and facts "that rebut

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[18] Lisa Kern Griffin, *Criminal Lying, Prosecutorial Power, and Social Meaning*, 97 CAL. L. REV. 1515, 1518 (2009).

the recipient's predictable inference." The Bayesian framework has straightforward application to securities cases like that at issue in *Omnicare*. The framework extends to other commercial cases as well, and to cases of consumer fraud and similar claims, like those at issue in opioid litigation.

HOSPITAL MERGERS: HOW THE DYNAMIC OF THE HEALTH CARE INDUSTRY UPSETS GEOGRAPHIC MARKET DEFINITION

*Steven Horn**

INTRODUCTION

The United States health care system is one of the least-efficient systems in the world.[1] It is considered "expensive, fragmented, poorly organized," and often fails to provide high quality health care to American citizens.[2] In order to address some of these problems, and improve the system's overall efficiency, Congress passed the Patient Protection and Affordable Care Act ("ACA") in 2010.[3]

While estimates show that the ACA has reduced the number of uninsured individuals,[4] the ACA "both explicitly and implicitly" incentivizes health care organizations to consolidate.[5] In fact, between 2005 and 2012, the number of hospital mergers in the United States has more than doubled.[6] As a result, the Federal Trade Commission ("FTC"), in its role as evaluator of competition in hospital mergers, has become a meaningful participant in the evolution of the U.S. health care system.[7]

When assessing a hospital merger, the FTC determines whether the "merger would lead to anticompetitive effects."[8] Often, this requires the

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1 Lisa Du & Wei Lu, *U.S. Health-Care System Ranks as One of the Least-Efficient*, BLOOMBERG (Sept. 28, 2016), https://www.bloombergquint.com/business/2016/09/29/u-s-health-care-system-ranks-as-one-of-the-least-efficient.

2 Michael J. Montgomery, *Coordination or Consolidation? Accountable Care Organizations and Antitrust Policy under the Medicare Shared Savings Program*, 67 HASTINGS L.J. 1119, 1120 (2016).

3 Patient Protection and Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119 (2010); *see also* Cory H. Howard, *The Federal Trade Commission And Federal Courts' Scrutiny Of Healthcare Mergers: Do Inflexible Standards And Increased Scrutiny Stifle The Legislative Intent Of The Patient Protection And Affordable Care Act?*, 18 QUINNIPIAC HEALTH L.J. 67, 69-70 (2015).

4 U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES, OFFICE OF THE ASSISTANT SECRETARY FOR PLANNING AND EVALUATION, HEALTH INSURANCE COVERAGE AND THE AFFORDABLE CARE ACT, 2010 – 2016 (Mar. 3, 2016), https://aspe.hhs.gov/sites/default/files/pdf/187551/ACA2010-2016.pdf.

5 Howard, *supra* note 3, at 83.

6 *A Wave of Hospital Mergers*, N.Y. TIMES, (Aug. 12, 2013), http://www.nytimes.com/interactive/2013/08/13/business/A-Wave-of-Hospital-Mergers.html.

7 Montgomery, *supra* note 2, at 1146.

8 Erica L. Rice, *Evanston's Legacy: A Prescription For Addressing Two-Stage Competition In Hospital Merger Antitrust Analysis*, 90 B.U. L. REV. 431, 434 (2010).

FTC to define a relevant market.[9] A relevant market consists of both a product market and a geographic market.[10] However, for hospital mergers in particular, defining a geographic market is "often the deciding factor."[11] Due to the nature of the health care industry and patient idiosyncrasies, defining a geographic market for hospital services is a difficult task.[12]

Historically, the FTC has relied on patient flow data.[13] In the mid-1990s and early 2000s, the use of this data ultimately led the FTC to "[lose] a string of hospital merger cases."[14] In the early 2000s, however, the FTC shifted away from patient flow data, in favor of a more varied approach.[15] Ultimately, this shift started a winning streak that lasted until May of 2016.[16] In May and June of 2016, the FTC lost two consecutive hospital merger challenges due, primarily, to geographic market definition.[17] While the Third and Seventh Circuits have since reversed the losses,[18] the courts' opinions still raise questions about how geographic markets should be defined in hospital merger cases going forward.

Thus, Part I of this Comment examines the FTC's approaches to geographic market definition in hospital merger cases from the 1990s to 2016. Part II considers the FTC's approach, and the courts' responses, to geographic market definition in the two recent hospital merger cases. Lastly, Part III examines the difficulties of presenting evidence in support of a relevant geographic market in hospital mergers and suggests the adoption of a standardized approach through an amendment to the Horizontal Merger Guidelines.

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[9] *Id.* at 434-35.

[10] FTC v. OSF Healthcare Sys., 852 F. Supp. 2d 1069, 1075 (N.D. Ill. 2012).

[11] Rice, *supra* note 8, at 459.

[12] *Id.* at 437-38.

[13] Gregory Vistnes, *Defining Geographic Markets for Hospital Mergers*, 13 ANTITRUST ABA 28, 28 (1999).

[14] Lisa Jose Fales & Paul Feinstein, *How To Turn A Losing Streak Into Wins: The FTC and Hospital Merger Enforcement*, 29 ANTITRUST ABA 31, 31 (2014).

[15] Sean May & Monica Noether, *Unresolved Questions Relating to Market Definition in Hospital Mergers*, 59 ANTITRUST BULL. 479, 493 (2014).

[16] Fales & Feinstein, *supra* note 14, at 36; *see also* FTC v. Penn State Hershey Med. Ctr., 185 F. Supp. 3d 552, 564 (M.D. Pa. 2016), *rev'd*, FTC v. Penn State Hershey Med. Ctr., 838 F.3d 327, 353-54 (3d Cir. 2016).

[17] *See Penn State Hershey Med. Ctr.*, 185 F. Supp. 3d at 556-58; FTC v. Advocate Health Care, No. 15 C 11473, 2016 U.S. Dist. LEXIS 79645 at *10-21 (N.D. Ill. June 20, 2016).

[18] *See Penn State Hershey Med. Ctr.*, 838 F.3d at 353-54; FTC v. Advocate Health Care Network, 841 F.3d 460, 476 (7th Cir. 2016).

I. HISTORY OF GEOGRAPHIC MARKET DEFINITION IN HOSPITAL MERGERS

The FTC and the Department of Justice ("DOJ") are tasked with enforcing federal antitrust laws.[19] This responsibility requires them to evaluate mergers and determine whether "the merger would lead to anticompetitive effects."[20] In making a determination, the FTC and the DOJ are required to define a relevant market.[21] A relevant market includes both a product market and a geographic market.[22]

From the middle of the 1990s to the early 2000s, the FTC "lost a string of hospital merger cases."[23] During that period, the courts approved of the use of the Elzinga-Hogarty test to analyze and define the relevant geographic market.[24] In 2002, the FTC formed a litigation task force to evaluate the string of losses and examine new strategies for challenging hospital mergers.[25] Two years later, in 2004, the FTC and the DOJ released a report on the "role of competition in health care," evaluating how antitrust enforcement can protect competition in the industry.[26] Following the 2004 report, the FTC went on a winning streak by rejecting the Elzinga-Hogarty test and employing a new approach.[27]

A. *The Elzinga-Hogarty Test*

During the mid-1990s and early 2000s, the courts explicitly approved the use of the Elzinga-Hogarty test to define the relevant geographic market.[28] The Elzinga-Hogarty test developed from an article written by Kenneth G. Elzinga and Thomas F. Hogarty in 1973.[29] The article criticized

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[19] Rice, *supra* note 8, at 433-34.

[20] *Id.* at 434.

[21] *Id.* at 434-35.

[22] *OSF Healthcare*, 852 F. Supp. 2d at 1075.

[23] Fales & Feinstein, *supra* note 14, at 31.

[24] FTC & DEP'T OF JUSTICE, IMPROVING HEALTH CARE: A DOSE OF COMPETITION: A REPORT BY THE FEDERAL TRADE COMMISSION AND THE DEPARTMENT OF JUSTICE Chapter 4, 5-6 (2004), https://www.ftc.gov/sites/default/files/documents/reports/improving-health-care-dose-competition-report-federal-trade-commission-and-department-justice/040723healthcarerpt.pdf.

[25] Timothy J. Muris, Chairman, FTC, Prepared Remarks Before the 7th Annual Competition in Health Care Forum in Chicago, Illinois: Everything Old Is New Again: Health Care and Competition in the 21st Century 19-20 (Nov. 7, 2002), https://www.ftc.gov/sites/default/files/documents/public_statements/everything-old-new-again-health-care-and-competition-21st-century/murishealthcarespeech0211.pdf.

[26] FTC & DEP'T OF JUSTICE, *supra* note 25, at Executive Summary.

[27] Rice, *supra* note 8, at 446.

[28] FTC & DEP'T OF JUSTICE, *supra* note 25, at ch. 4, 5-6.

[29] *See generally* Kenneth G. Elzinga & Thomas F. Hogarty, *The Problem of Geographic Market Delineation in Antimerger Suits*, 18 ANTITRUST BULL. 45 (1973).

the Government's geographic market definition in two well-known cases, *Philadelphia National Bank*[30] and *Pabst Brewing*[31].[32]

In both cases, Elzinga and Hogarty found that the Government used a distinct combination of supply and demand factors in order to show the relevant geographic market.[33] However, Elzinga and Hogarty argued that, in each case, the Government failed to take into account a key analytical element, either the "Little In From Outside" ("LIFO") indicator or the "Little Out From Inside" ("LOFI") indicator.[34] Thus, Elzinga and Hogarty proposed their own method, utilizing both a LIFO and a LOFI measurement.[35]

LIFO measures how much of a product is imported into a hypothetical market from outside the proposed area.[36] LOFI, on the other hand, measures how much of a product is exported from inside the hypothetical market to outside the area.[37] Elzinga and Hogarty found that, alone, each measurement overlooked a key element of supply and demand.[38] However, together LIFO and LOFI measurements could render a geographic market "that (1) is consistent with existing economic theory, (2) avoids the LIFO and LOFI errors observed in past legal decisions, and (3) can be readily implemented in a variety of circumstances."[39]

This conclusion is based on the premise that "in a well-defined antitrust market, there should be few imports or exports."[40] In the context of hospital mergers, the Elzinga-Hogarty test looked at "patient flow data to determine the geographic range from which the hospitals currently draw patients[.]"[41] Accordingly, LIFO measured the percentage of patients that lived inside the proposed geographic market but traveled outside of the area for hospital care (import of hospital services), while LOFI measured the percentage of patients that lived outside of the area but received care from hospitals within the proposed geographic market (export of hospital services).[42] Because the Elzinga-Hogarty test dictates that there should be

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30 *See generally* United States v. Philadelphia Nat'l Bank, 374 U.S. 321 (1963).

31 *See generally* United States v. Pabst Brewing Co., 384 U.S. 546 (1966).

32 Elzinga & Hogarty, *supra* note 30, at 56-72.

33 *Id.* at 53-60.

34 *Id.* at 63-65.

35 *Id.*

36 *Id.* at 54-55.

37 Elzinga & Hogarty, *supra* note 30, at 57-59.

38 *Id.* at 72-73. Elzinga and Hogarty concluded that "[t]he LIFO element overlooks the possibility of substantial supply flowing outside of the hypothetical geographic market area; the LOFI element overlooks the possibility of substantial demand going outside the hypothetical area." *Id.* at 64.

39 *Id.* at 72-73.

40 Gregory Vistnes, *Hospitals, Mergers, and Two-Stage Competition*, 67 ANTITRUST L.J. 671, 689 (2000).

41 Rice, *supra* note 8, at 438.

42 Vistnes, *supra* note 41, at 689.

few imports and few exports in a well-defined market, the geographic market was expanded if the inflow or outflow of patients was too high.[43]

Ultimately, the acceptance, and use, of the Elzinga-Hogarty test in the mid-1990s and early 2000s, led the FTC to a string of losses in hospital merger cases.[44] For example, in *FTC v. Freeman*, the Eighth Circuit Court of Appeals held that the FTC failed to establish a relevant geographic market.[45] In defining the market, the FTC used the Elzinga-Hogarty test to propose a geographic market that extended 27 miles "in all directions."[46] The market consisted of 44 zip codes in which 80 percent of the hospitals' admitted patients resided (little export of hospital services).[47] While this percentage passed Elzinga-Hogarty's suggested requirement of 75 percent,[48] the district court noted that "it is closer to a 'weak' than a 'strong' market standard."[49] The defendants' expert, on the other hand, proposed a broader geographic market that accounted for 90 percent of the hospitals' admitted patients.[50]

The FTC also presented evidence that "78 percent of the patients" living within the proposed market refused to travel outside of the area for hospital care (little import of hospital services).[51] Again, this percentage fell above Elzinga-Hogarty's suggested standard for a weak market but below the suggested standard for a strong market.[52] Nonetheless, the court dismissed the FTC's calculation, stating that it was "based on incomplete data that ignore[d] significant patient outflows."[53] As a result, the *Freeman* court rejected the FTC's Elzinga-Hogarty-based geographic market and denied the Agency's request for a preliminary injunction.[54]

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43 *Id.*

44 Marco Varkevisser & Frederik T. Schut, *The Impact of Geographic Market Definition on the Stringency of Hospital Merger Control in Germany and the Netherlands*, 7 HEALTH ECON. POL'Y & L. 363, 363-381 (2012) ("From 1989 to 2001, however, the federal antitrust agencies were defeated in all but one case brought to court").

45 FTC v. Freeman Hosp., 69 F.3d 260, 272 (8th Cir. 1995).

46 *Id.* at 268.

47 FTC v. Freeman Hosp., 911 F. Supp. 1213, 1218 (W.D. Mo. 1995), *aff'd*, 69 F.3d 260.

48 Elzinga & Hogarty, *supra* note 30, at 73-74.

49 *Freeman Hosp.*, 911 F. Supp. at 1218; *see also* Kenneth G. Elzinga & Thomas F. Hogarty, *The Problem of Geographic Market Delineation Revisited: The Case of Coal*, 23 ANTITRUST BULL. 1, 2-3 (1978) (providing an updated suggestion of "90 percent for a 'strong' market and 75 percent for a 'weak' market").

50 *Freeman Hosp.*, 911 F. Supp. at 1219.

51 *Id.* at 1220.

52 Elzinga & Hogarty, *supra* note 50, at 2-3.

53 *Freeman Hosp.*, 911 F. Supp. at 1220.

54 *Id.* at 1228.

The rest of the FTC's losses in the 1990s did not mirror *Freeman* exactly.[55] However, all of the FTC's losses involved the use of the Elzinga-Hogarty test to define a geographic market.[56] Ultimately, the FTC responded by reconsidering its approach to market definition in hospital mergers and shifting away from the Elzinga-Hogarty test.[57]

B. *A New Approach*

After the string of losses in the 1990s, the FTC, led by former-Chairman Tim Muris, assembled a litigation task force to evaluate new strategies for the FTC in hospital mergers.[58] In 2004, the FTC and the DOJ published a report that examined competition in the health care industry.[59] The 2004 report specifically condemned the use of the Elzinga-Hogarty test, finding that it was "not [a] valid or reliable [method] in defining geographic markets in hospital merger cases" because it led to the "acceptance of implausibly large geographic markets."[60] Accordingly, the report concluded that "courts should apply the *Merger Guidelines'* hypothetical monopolist test in hospital merger cases."[61]

A year later, the FTC officially rejected the Elzinga-Hogarty test in its decision in *In re Evanston Northwestern Healthcare*.[62] In *Evanston*, the administrative law judge ("ALJ") echoed the 2004 report's findings, stating that the Elzinga-Hogarty test was an inappropriate method of defining a geographic market in hospital mergers.[63] In fact, the ALJ relied primarily on testimony from Professor Kenneth Elzinga.[64] Professor Elzinga's testimony explained that "[p]atient-flow data and the Elzinga-Hogarty test are inapplicable to geographic market definition for a differentiated product such as hospital services."[65]

Citing Elzinga's testimony, the ALJ acknowledged two specific problems with the Elzinga-Hogarty test: the "payor problem" and the

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55 *See generally* FTC v. Tenet Health Care Corp., 186 F.3d 1045 (8th Cir. 1999); FTC v. Butterworth Health Corp., 946 F. Supp. 1285 (W.D. Mich. 1996), *aff'd*, 1997-2 Trade Cas. (CCH) P 71,863 (6th Cir. 1997); United States v. Mercy Health Servs., 902 F. Supp. 968 (N.D. Iowa 1995).

56 *Id.*

57 FTC & DEP'T OF JUSTICE, *supra* note 25, at 25-27.

58 Muris, *supra* note 26, at 19-20.

59 *See generally* FTC & DEP'T OF JUSTICE, *supra* note 25.

60 *Id.* at ch. 4, 5-6.

61 *Id.* at ch. 4, 7.

62 In re Evanston Nw. Healthcare Corp., F.T.C. Docket No. 9315 at 30-40 (Initial Decision Oct. 21, 2005) [hereinafter Evanston Initial Decision], https://www.ftc.gov/sites/default/files/documents/cases/2005/10/051020initialdecision.pdf.

63 *Id.* at 30-31.

64 *Id.*

65 *Id.* at 30.

"silent majority" problem.[66] The "payor problem" recognized that insurance companies, not patients, actually pay for hospital services.[67] Thus, patients do not directly affect the price of hospital care.[68] The "silent majority" problem referred to the assumption that because some patients travel for hospital services other patients will respond to a price change by traveling as well.[69] This assumption is incorrect because "the patients who leave may do so for idiosyncratic reasons (such as traveling to receive organ transplants, but preferring to deliver babies close to home)."[70] Therefore, a "silent majority" of patients is unlikely to respond to a price change by traveling to hospitals further away.[71]

In the FTC's final opinion, the Commission expounded on the ALJ's decision to reject the Elzinga-Hogarty test, concluding that "the hypothetical monopolist methodology is almost certain to produce a more reliable determination of the geographic market."[72] However, then-Chairman Deborah Platt Majoras found that the ALJ failed to discuss the use of the hypothetical monopolist test to define the relevant geographic market.[73] Specifically, Chairman Majoras found that the ALJ rested his opinion on testimony from insurance companies and patient travel patterns.[74] As a result, Chairman Majoras concluded that the ALJ failed to determine "whether the Commission can define the market based on the econometric evidence."[75]

In answering that question, Chairman Majoras explained that there is a "fundamental relationship between market definition and competitive effects analysis in unilateral cases involving differentiated product[s]" (such as hospital services).[76] Unilateral effects result when "a sufficient amount of the sales loss due to a post-merger price increase is diverted to the product of the merger partner to make the price increase profitable."[77] This outcome depends primarily on whether or not consumers can, and are willing to, switch to a substitute product.[78]

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66 *Id.*

67 *Id.*

68 Evanston Initial Decision, *supra* note 63, at 30.

69 *Id.*

70 May & Noether, *supra* note 15, at 493-94.

71 Evanston Initial Decision, *supra* note 63, at 30.

72 In re Evanston Nw. Healthcare Corp., F.T.C. No. 9315 at 78 (Aug. 6, 2007) [hereinafter Evanston Final Decision], https://www.ftc.gov/sites/default/files/documents/cases/2007/08/070806opinion.pdf.

73 *Id.* at 58-59.

74 *Id.* at 58.

75 *Id.*

76 *Id.*

77 Evanston Final Decision, *supra* note 73, at 59.

78 *Id.*

Because this analysis focuses on "the unilateral loss of 'localized' competition," it mirrors the process for market definition as defined by the Horizontal Merger Guidelines ("Guidelines").[79] According to the Guidelines, a relevant market is defined if a hypothetical monopolist can profitably impose a significant and non-transitory increase in price ("SSNIP").[80] Although a SSNIP may vary due to the nature of the industry, the Guidelines state that the Agencies often use a SSNIP of 5% as a benchmark.[81]

In *Evanston*, the evidence showed that the post-merger hospital entity had already raised prices between 9% and 18%.[82] Thus, Chairman Majoras explained:

> [I]f a merger enables the combined firm unilaterally to raise prices by a SSNIP for a non-transitory period due to the loss of competition between the merging parties, the merger plainly is anticompetitive, and the merging firms comprise a relevant antitrust market because the merged entity is considered to be a 'monopolist' under the Guidelines.[83]

As a result, Chairman Majoras concluded that, in *Evanston*, the FTC "correctly defined the geographic market" using a SSNIP analysis.[84]

C. *Post-Evanston and the SNNIP Analysis*

After *Evanston*, the FTC shifted away from the Elzinga-Hogarty test completely.[85] This departure ultimately led the FTC on a winning streak that would last over a decade.[86] During that streak, neither the FTC nor the

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[79] *Id.* at 60; *see also* U.S. DEP'T OF JUSTICE & FTC, HORIZONTAL MERGER GUIDELINES § 4 (2010).

[80] U.S. DEP'T OF JUSTICE & FTC, *supra* note 80, at § 4.

[81] *Id.* at § 4.1.2.

[82] Evanston Final Decision, *supra* note 73, at 58.

[83] *Id.* at 60.

[84] *Id.* at 63-64.

[85] *See generally* St. Alphonsus Med. Ctr. - Nampa, Inc. v. St. Luke's Health Sys. Ltd., 778 F.3d 775 (9th Cir. 2015); ProMedica Health Sys. v. FTC, 749 F.3d 559 (6th Cir. 2014); OSF Healthcare, 852 F. Supp. 2d 1069; In re Renown Health, F.T.C. No. C-4366 (Dec. 4, 2012), https://www.ftc.gov/sites/default/files/documents/cases/2012/12/120806renownhealthcmpt.pdf; In re Reading Health Sys. and Surgical Inst. of Reading, F.T.C. No. 9353 (Nov. 16, 2012), https://www.ftc.gov/sites/default/files/documents/cases/2012/11/121116readingsurgicalcmpt.pdf; In re Phoebe Putney Health Sys., Inc., F.T.C. No. 9348 (Apr. 20, 2011), https://www.ftc.gov/sites/default/files/documents/cases/2011/04/110420phoebecmpt.pdf; In re Inova Health Sys. Foundation and Prince William Health Sys., Inc., F.T.C. No. 9326 (May 13, 2008), https://www.ftc.gov/sites/default/files/documents/cases/2008/05/080513complaint.pdf.

[86] *Id.*

courts relied on the Elzinga-Hogarty test.[87] Instead, the FTC employed a SSNIP analysis, using different types of evidence to support its conclusions.[88]

For instance, in *St. Alphonsus Medical Center v. St. Luke's Health System*, the FTC challenged the acquisition of the Saltzer Medical Group ("Saltzer") by St. Luke's Health System ("St. Luke's").[89] While both parties agreed on the relevant product market, the defendants "vigorously dispute[d]" the FTC's proposed geographic market of Nampa, Idaho.[90] The FTC argued that "Nampa consumers demand[ed] local primary care . . . therefore [insurers] must include Nampa primary-care doctors in their networks to offer commercially viable policies to Nampa consumers and employers."[91] To support this conclusion, the FTC introduced evidence, showing that 68% of Nampa residents received care in the City of Nampa and 16% received care in zip codes adjacent to Nampa.[92] Accordingly, the evidence demonstrated that 84% of Nampa residents received care locally.[93]

In addition, the FTC presented testimony from local insurers, stating that insurers needed to include "local network doctors" in order to market "commercially viable" plans to local consumers.[94] As an example, the FTC presented the city of Twin Falls, where an insurer attempted to reject a price increase of 8%.[95] Instead, the insurer attempted to construct "a network without any physicians in Twin Falls, but . . . [the] network was not marketable to Twin Falls employers."[96] Therefore, the insurer was forced to accept the price increase demanded by local physicians.[97]

In response, the defendants argued that the FTC's "static" evidence failed to show "how Nampa consumers *actually* responded when faced with a price increase."[98] The defendants argued that 32% of Nampa residents already received care outside of the Nampa area, that local insurers provided inconsistent testimony, and that a natural experiment demonstrated that a regional employer would switch networks in response

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87 *Id.*

88 *Id.*

89 *St. Luke's*, 778 F.3d at 781-82.

90 *Id.* at 784-85.

91 Answering Brief for Plaintiffs/Appellees The Federal Trade Commission and The State Of Idaho at 26, *St. Luke's*, 778 F.3d 775 [hereinafter St. Luke's FTC Brief], https://www.ftc.gov/system/files/documents/cases/140813stlukeansweringbrief.pdf.

92 *Id.* at 28.

93 *Id.*

94 *Id.* at 29-30.

95 *Id.* at 30.

96 *Id.*

97 St. Luke's FTC Brief, *supra* note 92, at 30.

98 Brief of Appellants at 32, *St. Luke's*, 778 F.3d 775, https://www.ftc.gov/system/files/documents/cases/140612briefofappellants.pdf.

to a small price increase.[99] Thus, the hospitals contended that "Nampa consumers would respond to anticompetitive price increases … [by] seek[ing] care outside of Nampa."[100]

The Ninth Circuit Court of Appeals "was unconvinced by the evidence," finding that insurers needed local physicians to market their plans to local employers.[101] As a result, the Ninth Circuit concluded that "a hypothetical Nampa PCP monopolist could profitably impose a SSNIP on insurers."[102]

While the FTC employed a similar approach in cases like *In re Reading Health*[103] and *In re Inova*,[104] the FTC has yet to demonstrate a standardized method of showing whether a hypothetical monopolist could impose a SSNIP in the proposed geographic market.[105]

II. ADVOCATE HEALTH CARE AND PENN STATE MEDICAL

After the FTC's win in *Evanston*, the Commission won or settled six straight hospital merger cases.[106] However, the winning streak came to an end in May of 2016 when the FTC lost two consecutive district court cases.[107] In both cases, the district courts rejected the FTC's geographic market definition and denied a preliminary injunction.[108] Although both cases have since been reversed, the district court opinions demonstrate the difficulties associated with presenting a geographic market in hospital merger cases.[109]

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99 *Id.* at 32-35.

100 *Id.* at 33.

101 *St. Luke's*, 778 F.3d at 785.

102 *Id.* at 784-85.

103 Complaint at 12-13, In re Reading Health, F.T.C. No. 9353 (proposing a geographic market "from which Reading Hospital draws approximately 85 percent of its patients").

104 Complaint at 12-13, In re Inova, F.T.C. No. 9326 (proposing a geographic market that included "hospitals located in Northern Virginia, [where] approximately 90 percent of their patients came from Northern Virginia").

105 *See generally St. Luke's*, 778 F.3d 775; *ProMedica*, 749 F.3d 559; *OSF Healthcare*, 852 F. Supp. 2d 1069; *In re Renown Health*, F.T.C. No. C-4366, *In re Reading Health*, F.T.C. No. 9353; *In re Phoebe Putney*, F.T.C. No. 9348; *In re Inova*, F.T.C. No. 9326.

106 *See generally St. Luke's*, 778 F.3d 775; *ProMedica*, 749 F.3d 559; *OSF Healthcare*, 852 F. Supp. 2d 1069; *In re Renown Health*, F.T.C. No. C-4366; *In re Reading Health*, F.T.C. No. 9353; *In re Phoebe Putney*, F.T.C. No. 9348; *In re Inova*, F.T.C. No. 9326.

107 *Penn State Hershey Med. Ctr.*, 185 F. Supp. 3d at 564; *Advocate Health Care*, 2016 U.S. Dist. LEXIS 79645 at *21.

108 *Id.*

109 *See generally Penn State Hershey Med. Ctr.*, 185 F. Supp. 3d 552; *Advocate Health Care*, 2016 U.S. Dist. LEXIS 79645.

A. *FTC v. Penn State Hershey Medical Center*

The FTC's first loss was handed down in May of 2016.[110] The case concerned the proposed merger between Penn State Hershey Medical Center ("Penn State") and PinnacleHealth System ("Pinnacle").[111] Penn State is a teaching hospital located in Hershey, Pennsylvania.[112] Pinnacle, on the other hand, is a health system consisting of two hospitals in Harrisburg, Pennsylvania and one hospital in Cumberland County, Pennsylvania.[113]

While the FTC and the hospitals agreed on a relevant product market, they "heartily" disagreed on the relevant geographic market.[114] The FTC proposed a geographic market consisting of four counties that make up the Harrisburg Metropolitan Area.[115] The hospitals argued that the FTC's proposed market was too narrow and "untethered to commercial realities."[116]

In support of a market defined around the Harrisburg Area, the FTC argued that "patients choose to seek care close to their homes or workplaces" and prefer "to obtain [general acuity] services locally."[117] Thus, the FTC argued that hospitals located outside of the area were not competitive substitutes.[118] Furthermore, the FTC contended that an insurance company would be unable to market a plan to Harrisburg Area residents if it did not include Harrisburg Area hospitals.[119] As a result, a hypothetical monopolist of health care services could profitably impose a SSNIP on insurance companies in the Harrisburg Area.[120]

The district court rejected the FTCs' arguments and denied its proposed geographic market, relying heavily on patient flow data.[121] For instance, the district court found, "[o]f particular import," that almost half of Penn State's patients travel from outside the Harrisburg Area and "several thousand" of Pinnacle's patients do not live in the area.[122] In addition, the court found that over 50% of Penn State's revenue is derived from outside of the proposed market because "half of [Penn State's]

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110 *See generally Penn State Hershey Med. Ctr.*, 185 F. Supp. 3d 552.

111 *Id.* at 554.

112 *Id.*

113 *Id.*

114 *Id.* at 556-57.

115 *Id.*

116 *Penn State Hershey Med. Ctr.*, 185 F. Supp. 3d at 557.

117 Complaint at 11, Penn State Hershey Med. Ctr., 185 F. Supp. 3d 552 [hereinafter Penn State Complaint], https://www.ftc.gov/system/files/documents/cases/160408pinnacleamendcmplt.pdf.

118 *Id.* at 11-12.

119 *Id.* at 12.

120 *Id.*

121 *Penn State Hershey Med. Ctr.*, 185 F. Supp. 3d at 556-58.

122 *Id.* at 557.

patients travel at least thirty minutes . . . and 20% travel over an hour."[123] The court concluded that this evidence disproved the FTC's argument that "GAC services are inherently local" and indicated that the proposed geographic market "is too narrow."[124]

Additionally, the district court noted that almost 20 hospitals were located within 65 minutes of the proposed market, many of which were closer to patients that had traveled to Penn State for care.[125] Due to the proximity of these hospitals, the court found that they offered a viable substitute to consumers if a hypothetical monopolist in the Harrisburg Area imposed a SSNIP.[126] Thus, the district court concluded that "the relevant geographic market proffered by the FTC is not one in which few patients leave . . . and few patients enter."[127]

Finally, the court found a pricing agreement between the hospitals and the two largest health insurers in the Harrisburg Area to be extremely persuasive.[128] Prior to the consummation of the merger, the hospitals and insurance companies agreed to a contract that would preserve the existing price structures for at least 5 years.[129] According to the court, this agreement effectively prevented the post-merger entity from imposing a SSNIP on insurance companies and, thus, neutralized the FTC's hypothetical monopolist test.[130]

For the reasons discussed above, the district court rejected the Commission's proposed geographic market and denied its request for a preliminary injunction.[131] However, the Third Circuit Court of Appeals reversed the district court's ruling.[132] Specifically, the Third Circuit found that the district court erred in three ways: (1) the court's reasoning closely resembled a "a discredited economic theory" (the Elzinga-Hogarty test); (2) the court neglected the role of insurers in the health care market; and (3) the court gave weight to private contracts that are irrelevant to the analysis of market definition.[133]

The Third Circuit found that the district court based its decision "primarily on the fact that 43.5% of Hershey's patients travel from outside of the Harrisburg area."[134] This fact, which is a LOFI measurement,

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123 *Id.*

124 *Id.* (quotations omitted).

125 *Id.*

126 *Penn State Hershey Med. Ctr.*, 185 F. Supp. 3d at 557.

127 *Id.* (quoting Little Rock Cardiology Clinic PA v. Baptist Health, 591 F.3d 591, 598 (8th Cir. 2009)) (quotations omitted).

128 *Penn State Hershey Med. Ctr.*, 185 F. Supp. 3d at 557-58.

129 *Id.* at 558.

130 *Id.*

131 *Id.* at 554.

132 *Penn State Hershey Med. Ctr.*, 838 F.3d at 334.

133 *Id.* at 339

134 *Id*. at 340.

mirrored "one of the two" steps required by the Elzinga-Hogarty test.[135] As the Third Circuit explained, this analysis is unreliable due to the two problems, the "payor" problem and the "silent majority" problem, which were discussed by the court in *Evanston*.[136] Nonetheless, the Third Circuit concluded that, even assuming the district court could rely on patient flow data, the court failed to consider a LIFO measurement, which is the second step required by the Elzinga-Hogarty test.[137]

Second, the Third Circuit found that the district court erred in neglecting to consider insurer response to a SSNIP.[138] In its analysis, the Third Circuit explained that the health care industry dictates that "[p]atients are largely insensitive to healthcare prices because they utilize insurance, which covers the majority of their healthcare costs."[139] Thus, insurers, rather than patients, actually feel the impact of a price increase.[140] According to the accepted "two-stage model of competition . . . hospitals compete to be included in an insurance plan's hospital network . . . [and] hospitals compete to attract individual members of an insurer's plan."[141] Due to these "commercial realities," the Third Circuit concluded that an analysis of the relevant geographic market, and the application of a SSNIP in particular, must be applied to the insurance companies.[142]

Finally, the Third Circuit found that the district court erred in including private agreements, between the hospitals and insurance companies, in its analysis of the relevant geographic market.[143] The Third Circuit explained that "[t]he hypothetical monopolist test is exactly what its name suggests: hypothetical."[144] Any agreement made, to restrict a future price increase, would be irrelevant to a SSNIP analysis.[145] Thus, the Third Circuit concluded that allowing these agreements to impact market definition "would enable antitrust defendants to escape effective enforcement of the antitrust laws."[146]

Because the district court erred in its analysis, the Third Circuit was left to determine whether the FTC proposed a relevant geographic market.[147] The Third Circuit found insurer testimony, stating "that they could not successfully market a network to employers without including at

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135 *Id.*
136 *Id.*
137 *Id.* at 341.
138 *Penn State Hershey Med. Ctr.*, 838 F.3d at 342.
139 *Id.*
140 *Id.*
141 *Id.*
142 *Id.*
143 *Id.* at 343.
144 *Penn State Hershey Med. Ctr.*, 838 F.3d at 343.
145 *Id.*
146 *Id.*
147 *Id.* at 345.

least one of the Hospitals," particularly persuasive.[148] This testimony was backed by a "natural experiment," in which an insurer attempted to offer patients a plan that did not include Advocate or Hershey, but the insurer ended up losing "half its members."[149] From this evidence, the Third Circuit concluded that the merger would sufficiently increase the hospitals' bargaining power over insurers to make a SSNIP profitable.[150] As a result, the Third Circuit held that the FTC met its burden of defining a relevant geographic market.[151]

B. *FTC v. Advocate Health Care*

The FTC's second loss was handed down in June of 2016.[152] The case involved the proposed merger of Advocate Health Care Network ("Advocate") and NorthShore University HealthSystem ("NorthShore").[153] Advocate is a health care network consisting of eleven hospitals in the Chicago area.[154] NorthShore is a health care network consisting of four hospitals in the suburbs of Chicago.[155]

Although the hospitals and the FTC agreed on the relevant product market, the parties disagreed on the relevant geographic market.[156] The FTC proposed a geographic market defined around part of the North Shore Area, which included six of the merging hospitals.[157] In contrast, NorthShore argued that, pursuant to the FTC's decision in *Evanston*, the NorthShore hospitals constitute a separate geographic market that does not include Advocate hospitals.[158] Advocate denied all allegations regarding geographic market definition in its Answer.[159]

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148 *Id.*

149 *Id.* at 345-46.

150 *Penn State Hershey Med. Ctr.*, 838 F.3d at 346.

151 *Id.*

152 *See generally Advocate Health Care*, 2016 U.S. Dist. LEXIS 79645.

153 *Id.* at *4-5.

154 *Id.* at *4.

155 *Id.* at *4-5.

156 *Id.* at *10-11.

157 Complaint at 3, Advocate Health Care, 2016 U.S. Dist. LEXIS 79645, https://www.ftc.gov/system/files/documents/cases/151222advocatecmpt.pdf; *see also* Plaintiffs' Proposed Findings of Fact and Conclusions of Law at 7, Advocate Health Care, 2016 U.S. Dist. LEXIS 79645 [hereinafter Advocate FTC Proposed Findings] (stating that "[t]he delineated geographic market—the North Shore Area—includes 11 hospitals").

158 Answer for NorthShore at 6-7, Advocate Health Care, 2016 U.S. Dist. LEXIS 79645, https://www.ftc.gov/system/files/documents/cases/advocate_healthcare_respondent_northshore_university_health_systems_answer_to_administrative_complaint_580478.pdf.

159 Answer for Advocate at 5-6, Advocate Health Care, 2016 U.S. Dist. LEXIS 79645, https://www.ftc.gov/system/files/documents/cases/respondents_answer_and_affirmative_defenses_of_advocate_health_care_network_and_advocate_health_and_hospitals_corp._580480-_public.pdf.

In its Proposed Findings, the FTC explained that "[p]atients prefer to receive GAC Services close to home."[160] To support its conclusion, the FTC presented evidence of travel patterns that showed most patients residing in the area travel under thirteen miles, or eighteen minutes, to receive care.[161] The FTC also presented diversion ratios to support its argument.[162] Specifically, the FTC argued that the calculated diversion ratios "demonstrate that the level of substitution across the 11 hospitals in the North Shore Area is sufficiently high to pass the hypothetical monopolist test, i.e., a hypothetical monopolist that owned all of them could profitably raise price by a SSNIP."[163] Finally, the FTC argued that destination hospitals should be excluded from the geographic market because they are not a sufficient alternative to local hospitals.[164] From this evidence, the FTC concluded that a hypothetical monopolist of health care services could profitably impose a SSNIP in the proposed geographic market.[165]

The hospitals disputed the FTC's market definition, arguing that patient data, diversion ratios, and the exclusion of destination hospitals are inconsistent with the proper definition of the geographic market.[166] First, the hospitals challenged the FTC's premise that patients seek care locally by providing evidence that a significant percentage of patients travel for hospital care.[167] For instance, the hospitals contended that half of the patients who are treated within the geographic market travel from outside of the area for hospital care.[168] Next, the hospitals asserted that diversion ratios showed "more than half of the patients seeking inpatient services from one of the eleven hospitals in the [proposed market] would 'divert' to a hospital outside that area if the patient's first choice hospital became unavailable."[169]

The hospitals also argued that the exclusion of destination hospitals was problematic.[170] In support, the hospitals explained, that under the FTC's definition of destination hospitals, multiple hospitals that were included in

160 Advocate FTC Proposed Findings, *supra* note 158, at 8-9.

161 *Id.* at 10 (stating "[a] quarter of patients living in NorthShore's service area travel 3 miles or less (less than 6 minutes) to the admitted hospital, half of patients travel less than 7 miles (less than 11 minutes), and 75% of patients travel less than 13 miles (18 minutes or less)").

162 *Id.* at 12.

163 *Id.*

164 *Id.* at 12-13; *see also Advocate Health Care*, 2016 U.S. Dist. LEXIS 79645 at *15 (defining destination hospitals as "those that attract patients from throughout the Chicago metropolitan area, at long distances") (quotations omitted).

165 Advocate FTC Proposed Findings, *supra* note 158, at 12.

166 Defendants' Proposed Findings of Fact and Conclusions of Law at 12-31, Advocate Health Care, 2016 U.S. Dist. LEXIS 79645 [hereinafter Advocate Hospital Proposed Findings].

167 *Id.* at 15-16.

168 *Id.* at 16 (also explaining that "25% of the patients residing in the [proposed market] travel to other hospitals outside that area—often to hospitals near downtown Chicago—for inpatient services").

169 *Id.* at 16-17 (contending as a high as "68% of the patients for NS Evanston" would divert to hospitals outside the proposed market).

170 *Id.* at 18-19.

the proposed market could also be considered destination hospitals.[171] Furthermore, the hospitals contended that some of the destination hospitals are located closer to market residents than hospitals that were included in the proposed market.[172]

Additionally, the hospitals presented Northwestern Memorial ("Northwestern") as a prime example of a destination hospital that should be included in the proposed market.[173] The hospitals argued that Northwestern was located close to the proposed market, provided outpatient facilities "within close proximity" to the merging hospitals, and, most importantly, had the "highest diversion" rate from both Advocate and NorthShore.[174] From this evidence, the hospitals concluded that the FTC failed to propose a proper geographic market.[175]

The district court was ultimately persuaded by the hospitals' arguments, finding that "the criteria [the FTC] used to identify the geographic market are flawed."[176] Specifically, the court took issue with the FTC's exclusion of destination hospitals.[177] First, the court found "no economic basis" for the FTC to designate certain hospitals destination hospitals.[178] Next, the court rejected the argument that destination hospitals are not a sufficient alternative because patients prefer hospitals close to where they live.[179] Finally, the court concluded that the FTC overlooked "commercial realities" by not considering outpatient facilities in their analysis of destination hospitals.[180] As a result, the court held that the FTC had "not shouldered their burden of proving a relevant geographic market."[181]

However, the Seventh Circuit Court of Appeals disagreed with the district court's analysis and ultimately reversed the district court's ruling.[182] Specifically, the Seventh Circuit found that the district court misunderstood the hypothetical monopolist test and erroneously interpreted the economic data.[183] In doing so, the Seventh Circuit relied predominantly on testimony from industry participants and data regarding patient travel patterns.[184]

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171 *Id.* at 19.
172 Advocate Hospital Proposed Findings, *supra* note 167, at 19.
173 *Id.* at 19-23.
174 *Id.* at 20-22.
175 *Id.* at 12-31.
176 *Advocate Health Care*, 2016 U.S. Dist. LEXIS 79645 at *15-16.
177 *Id.* at *16-20.
178 *Id.* at *16.
179 *Id.* at *16-17.
180 *Id.* at *18-20.
181 *Id.* at *21.
182 *Advocate Health Care*, 841 F.3d at 476.
183 *Id.* at 472-73.
184 *Id.* at 472-76.

First, the Seventh Circuit rejected the district court's conclusion regarding destination hospitals.[185] The Seventh Circuit explained that academic hospitals, "which [the FTC's expert] rather inauspiciously called 'destination hospitals,'" tend to attract patients from longer distances because they offer a "complexity" of services.[186] In its explanation, the Seventh Circuit specifically referenced testimony from an "insurance executive [who] explained that NorthShore and Advocate hospitals were not academic medical centers."[187] Relying on this and other testimony from insurance companies, the Seventh Circuit concluded that the FTC's expert had a strong "basis for distinguishing between academic medical centers and other hospitals," such as Advocate and NorthShore.[188]

Next, the Seventh Circuit criticized the district court for rejecting the FTC's argument that patients prefer local hospitals.[189] The Seventh Circuit referenced evidence that showed:

> 73 percent of patients living in plaintiffs' proposed market receive hospital care there . . . [e]ighty percent of those patients drive less than 20 minutes or 15 miles to their chosen hospital [and] . . . [n]inety-five percent of those patients drive 30 miles or less—the north-to-south length of plaintiffs' proposed market—to reach a hospital.[190]

Accordingly, the Seventh Circuit determined that the evidence supported the FTC's conclusion that patients tend to go to hospitals that are located close to where they live.[191]

Finally, the Seventh Circuit found that the district court disregarded testimony from insurance companies and, instead, relied on patient diversion ratios.[192] The diversion ratios showed that fifty-two percent of patients would seek care at a hospital outside of the proposed geographic market if their hospital of choice were unavailable.[193] In addition, a large percentage of those patients would resort to Northwestern, which was considered an academic hospital and excluded from the proposed geographic market.[194]

However, the insurance companies all testified that "in the North Shore Area, an insurer's network must include either Advocate or

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[185] *Id.* at 473-74.
[186] *Id.* at 465-66, 473-74.
[187] *Id.* at 474.
[188] *Advocate Health Care*, 841 F.3d at 473-74.
[189] *Id.* at 474 (quoting Advocate Health Care, 2016 U.S. Dist. LEXIS 79645 at *4).
[190] *Id.*
[191] *Id.*
[192] *Id.* at 474-76.
[193] *Id.* at 475.
[194] *Advocate Health Care*, 841 F.3d at 475.

NorthShore to offer a product marketable to employers."[195] Thus, a combination of Advocate and NorthShore would have significant power over insurance companies "who need them to offer commercially viable products to customers" in the North Shore Area.[196] Accordingly, the Seventh Circuit found that by focusing on diversion ratios the district court erroneously relied on patient preferences rather than "the hospitals … market power over the insurers."[197] As a result, the Seventh Circuit concluded that district court's analysis was flawed, and remanded the case for further proceedings.[198]

III. A STANDARDIZED APPROACH

Although the FTC won its appeals in *Penn State* and *Advocate*, both cases demonstrate the difficulties the FTC, opposing counsels, and the courts face in defining geographic markets in hospital mergers. In both *Penn State* and *Advocate*, the FTC began its definition of the relevant geographic market with the premise that patients prefer hospitals located close to their work or home.[199] This premise is crucial because it allowed the FTC to logically conclude that a hypothetical monopolist could impose a SSNIP on insurance companies in the proposed geographic market. While the FTC presented an array of evidence to support this premise, the dynamic relationship between hospitals, insurance companies, and patients made it difficult, if not impossible, to provide conclusive evidence pre-merger. Thus, the courts were left with no guidance to analyze and weigh the evidence put forward by the hospitals and the FTC.

In *Advocate*, the Seventh Circuit stated that "[t]he geographic market question asks, in essence, how many hospitals can insurers convince most customers to drive past to save a few percent on their health insurance premiums?"[200] This question is essential because it begins to address the unusual relationship between patients, hospitals, and insurance companies. The relationship is particularly unusual due to the fact that "[p]atients are largely insensitive to healthcare prices because they utilize insurance, which covers the majority of their healthcare costs."[201] Thus, patients will not directly feel the impact of a price increase, and even if they do it will not be until a significant amount of time has passed. Nonetheless, patients are still the ones physically traveling to the hospital and receiving medical services.

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195 *Id.* at 474.

196 *Id.* at 476.

197 *Id.*

198 *Id.*

199 Penn State Complaint, *supra* note 118, at 11; Advocate FTC Proposed Findings, *supra* note 158, at 8-9.

200 *Advocate Health Care*, 841 F.3d at 476.

201 *Penn State Hershey Med. Ctr.*, 2016 U.S. App. LEXIS 17525 at *25-26.

The patients, and often employers, are also the ones who choose what health insurance plan to purchase. Due to this dynamic, patient preferences are still relevant in an industry where pricing competition is dominated by hospitals and insurance companies.

According to the accepted "two-stage model of competition . . . hospitals compete to be included in an insurance plan's hospital network . . . [and] hospitals compete to attract individual members of an insurer's plan."[202] As a result, pricing, and the ability to raise prices, depends primarily on the bargaining power of hospitals and insurance companies.

Since the *Evanston* decision, the FTC has relied on the hypothetical monopolist test to assess the competitive balance between hospitals and insurers in a proposed geographic market.[203] Specifically, the hypothetical monopolist test is applied to insurance companies in order capture the "commercial realities" of the health care industry.[204] This analysis requires the FTC to show that a sufficient amount of patients could not be convinced to travel to distant hospitals so as to allow insurance companies to defeat a price increase imposed by the merging hospitals.

For example, if patients always go to local hospital A, insurance companies are forced to include hospital A in their insurance plan or lose the members that go to hospital A. In this scenario, hospital A has all of the bargaining power and can profitably impose a SSNIP on the insurance companies. However, if the number of patients that are willing to travel to another hospital increases, the insurance companies will theoretically lose less members, and hospital A will lose bargaining power. If the number of patients willing to travel continues to increase, the market will theoretically reach a point where insurance companies have enough bargaining power to reject a price increase from hospital A. At that point, hospital A will be unable to impose a SSNIP, the hypothetical monopolist test will fail, and the market should be broadened.

Theoretically, the hypothetical monopolist test is easily applied to hospital mergers. However, the test becomes difficult when applied in actual cases because there is no easy way to measure patient response to a hypothetical price increase imposed by hospitals on insurance companies. While predictions can be made based on diversion ratios, travel patterns, patient flow data, and testimony, the evidence is highly controversial. As *Penn State* and *Advocate* demonstrate, the presentation of this evidence can lead to divergent interpretations, the introduction of irrelevant evidence, and costly appeals. In order to avoid these obstacles in the future, the FTC

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202 *Id.* at *25.

203 *See generally St. Luke's*, 778 F.3d 775; *ProMedica*, 749 F.3d 559; *OSF Healthcare*, 852 F. Supp. 2d 1069; *In re Renown Health*, F.T.C. No. C-4366, *In re Reading Health*, F.T.C. No. 9353; *In re Phoebe Putney*, F.T.C. No. 9348; *In re Inova*, F.T.C. No. 9326.

204 *Penn State Hershey Med. Ctr.*, 838 F.3d at 342-43.

and DOJ could establish a standardized approach for assessing the evidence in support of the relevant geographic market in hospital mergers.

The Horizontal Merger Guidelines were last updated in August of 2010.[205] The current Guidelines provide general instruction as to what types of evidence are considered in determining "likely reactions of customers to price increases for the relevant product(s)."[206] While the instructions can be applied generally to hospital mergers, the Guidelines fail to fully address the evidentiary problems associated with geographic market definition in hospital mergers. Thus, an amendment to the Guidelines that specifically addresses hospital mergers would likely provide better guidance.

Admittedly, constructing an amendment that provides a standardized approach to presenting evidence of a geographic market in hospital mergers is not an easy task. Due to the unique nature of the industry, it is difficult, if not impossible, to present conclusive evidence of patient response to a SSNIP pre-merger. However, a structured approach to the available evidence could limit the possibility of misinterpretation, excess costs, and future appeals. Therefore, I propose a standardized approach that begins with an examination of diversion ratios, followed by a consideration of patient travel patterns, and a review of the testimony from relevant industry participants.

This standardized approach, while not conclusive, would provide a framework for courts, and attorneys, to employ going forward. First, an examination of diversion ratios would show which hospitals patients would choose if the merging hospitals were unavailable. This analysis would offer a basic understanding of which hospitals patients consider to be close substitutes to the merging hospitals. Moreover, diversion ratios would provide a strong starting point to understanding how far patients would be willing to travel if they were to feel the effects of a price increase.

Next, a consideration of patient travel patterns would enhance the understanding initiated by an examination of diversion ratios. Travel patterns will often differ based on geographic location. For instance, patients living in a rural area may be more likely to travel longer distances to receive care than patients living in an urban area. This may be due to the number of hospitals available or the quality of care offered.[207] Regardless, some patients may be willing to travel further than others to receive care. Thus, a consideration of patient travel patterns would help determine how likely patients in a given area would be to travel to distant hospitals in response to a price increase.

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205 *See generally* U.S. DEP'T OF JUSTICE & FTC, *supra* note 80.

206 *Id.* at § 4.2.1.

207 Ben Harder, *5 Cities With Tons of Top Hospitals*, U.S. NEWS (July 16, 2013), http://health.usnews.com/health-news/best-hospitals/articles/2013/07/16/5-cities-with-tons-of-top-hospitals.

Finally, a review of industry testimony would provide insight into whether patients, employers, and insurance companies consider hospitals interchangeable. Surely, the testimony is likely to be conflicting. However, it may still be helpful in determining whether patients would be willing to travel to a distant hospital.

While this approach does not provide a conclusive answer, it provides a framework for analyzing the relevant evidence. It would provide guidance to practitioners and limit excess litigation.

CONCLUSION

The FTC has employed many techniques, and presented a variety of evidence, to define geographic markets in hospital merger cases. In the mid-1990s and early 2000s, the FTC employed the Elzinga-Hogarty test. Since then, the FTC has used economic data and the hypothetical monopolist test. While the FTC has been successful using this data, the cases discussed above highlight the complexity, and difficulties, of defining a geographic market in hospital mergers. This complexity stems from the dynamic relationship between hospitals, insurance companies, and patients. In order to reduce excess litigation and provide guidance to practitioners, I propose that the FTC and DOJ set a standard for presenting evidence of the relevant geographic market in hospitals mergers.

FUTURE IN THE REARVIEW: AN ANALYSIS OF THE DOT'S 2014 REARVIEW CAMERA REGULATION

Brian Silver

INTRODUCTION

In 2014, the Department of Transportation (DOT or Department) introduced a new regulation that would purportedly result in immense safety benefits for those who are most vulnerable to a specific danger.[1] The DOT implemented a rule that would mandate the inclusion of rearview cameras in all newly manufactured automobiles weighing less than 10,000 pounds, beginning with vehicles produced in 2018.[2] The DOT justified the regulation by claiming that it would save numerous lives, with a disproportionate amount of those saved being children and the elderly.[3] While the regulation has the potential to positively impact the safety of many automobiles, the impending costs of the regulation, which were not fully included in the cost-benefit analysis conducted, strongly outweigh these positive consequences.

The DOT was established by an act of Congress in 1966 during the Lyndon Johnson administration,[4] with the Department beginning operations the following year.[5] In the Department's charter, the stated mission of the DOT is to "Serve the United States by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future."[6]

Located within the DOT are several agencies, with each assigned specific duties. Later in 1966, Congress passed the National Traffic and Motor Vehicle Safety Act, creating what is now the National Highway Traffic Safety Administration (NHTSA).[7] This agency is charged with designing and implementing rules that enhance the safety of motor vehicles.[8] The NHTSA conducts background research into dilemmas that the agency believes to be solvable, and then develops solutions to the

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1 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. 19,178 (Apr. 7, 2014) (to be codified at 49 C.F.R. 571).

2 *Id.*

3 *Id.* at 19,180.

4 UNITED STATES DEPARTMENT OF TRANSPORTATION, ABOUT DOT (2016).

5 *Id.*

6 *Id.*

7 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, WHO WE ARE AND WHAT WE DO.

8 *Id.*

problem by performing a form of cost-benefit analysis on a variety of proposed regulations.[9] If, in the agency's discretion, the positive effects of a specific rule outweigh the costs associated with implementing the new regulation, then the regulation will be implemented.[10]

Throughout the last 50 years, the NHTSA, as well as other agencies within the DOT, have implemented a variety of these measures that have had to pass legal scrutiny in a court of law. Since the NHTSA is statutorily authorized to weigh the costs and benefits associated with each potential regulation, private organizations that might object to a rule change, such as car manufacturers, have often challenged rules put forth by the agency. This has led to several high-profile court battles between the DOT and the nation's largest automobile manufacturers, and has allowed guidelines to be set by federal courts on the specific steps the government must take in order to create a valid regulation.

Today, one of the more controversial rules is the decision by the NHTSA to mandate that nearly all newly manufactured vehicles must be pre-installed with rearview cameras by 2018.[11] As noted previously, the agency cites the number of backover accidents, and the resulting harm to individuals, that occur each year as the justification for creating the rule.[12] A victim of a "backover accident" refers to an individual who is struck by an automobile while the vehicle is moving in reverse. When an individual operating the vehicle only has a standard rearview mirror to see what is located behind him or her, many, especially those in larger vehicles such as SUVs, do not have visual access to the entire area directly behind the vehicle. Incidents produced by this lack of visual access can disproportionately cause injuries to those who are more difficult to spot through a rearview mirror, such as small children or those who do not have the physical ability to quickly move out of the way of a vehicle, such as elderly individuals or those who are physically impaired.

When the NHTSA weighed the costs and benefits associated with the new rule, the agency employed a unique methodology to decide that the benefits outweighed the costs associated with it.[13] The regulatory review for this specific rule was distinct in the sense that the agency included non-monetizable considerations into its cost-benefit analysis.[14] The agency concluded that when monetized benefits and non-monetizable benefits are included, the positive effects offset the potential costs of the rule.[15] Although the agency otherwise operated under standard procedure, the

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9 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, ABOUT NHTSA.

10 *Id.*

11 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19,178.

12 *Id.* at 19,180.

13 *Id.* at 19,179.

14 *Id.* at 19,180.

15 *Id.*

NHTSA's typical methodology used for calculating a regulation's costs and benefits leaves much to be desired from both a statutory and a policy perspective. Irrespective of the fact that non-monetizable benefits were included in the cost-benefit analysis, a factor that was not included in the analysis was the impact that the regulation would have on future innovation in the automobile industry.[16]

This comment will first provide a background of where the NHTSA, and the DOT as a whole, receives its authority to implement regulation. The comment will use precedent established by the United States Supreme Court as well as federal circuit courts to develop the exact guidelines that the NHTSA must follow, including the required analysis that the agency must perform in order to determine the appropriateness of a regulation. Contrasts will be drawn between the regulation at hand and previous NHTSA rules that have either been upheld or nullified. Additionally, the difference between monetizable and non-monetizable costs and benefits will be explained, as well as how each of these categories has been used to calculate the efficiency of federal agency regulations as a whole.

Further, this comment will provide specific details of the rearview camera regulation, including a thorough description of how the NHTSA calculated the cost-benefit analysis and how the agency justified the rule. Subsequently, the comment will discuss recent developments in vehicle technology, and provide a brief summary on the future of the automobile industry. The potential safety effects of new automotive technology, including the impact of autonomous vehicles, will be examined.

The comment will then discuss the flaws with the current model of cost-benefit analysis employed by the NHTSA. It will show that the current model does not adequately take into account several necessary factors in order to properly determine the effects of the regulation. Under a new approach, taking into account the impact of a rule on future automobile innovation and the reduced safety risks that come with it, this comment will demonstrate that the regulation at hand does not meet the requisite criteria to pass a proper cost-benefit test from a statutory perspective.

This comment will review the likely economic impact of the rearview camera regulation on future innovation to contend that even if the rearview camera rule passes the legal scrutiny test, the precedent of not taking into account these effects is improper from a policy perspective. Nonetheless, the comment will determine if the effect of the regulation on future automobile innovation should be taken into account as part of the regulation's cost-benefit analysis as a monetizable factor. Alternatively, if the cost on future automobile innovation is a non-monetizable factor, the comment will evaluate whether or not these costs should still be included in

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16 *Id.* at 19,178.

the cost-benefit analysis, similar to the non-monetizable benefits included in the rearview camera regulation.

Overall, this comment will look to provide a more pragmatic approach to weighing the costs and benefits of NHTSA regulation. Agency rules are too often proposed and implemented without taking empirical economic data and future considerations into account. An approach that incorporates the totality of long-term motor vehicle safety is necessary. Employing this new analytical methodology can pave the way for manufacturers to quickly develop technology that would ultimately enhance consumer safety to a much greater extent than certain NHTSA regulations, such as the one requiring automobiles to be equipped with rearview cameras.

I. BACKGROUND

A. *General Authority*

In 1966, Congress passed the National Traffic and Motor Vehicle Safety Act and the Highway Safety Act, giving the NHTSA the authority to carry out automobile safety programs throughout the United States.[17] The agency is responsible for "reducing deaths, injuries and economic losses resulting from motor vehicle crashes."[18] Responsibilities assigned to the agency include, amongst others, investigating safety defects, promoting the use of enhanced safety devices, and conducting research in order to develop efficient means of improving motor vehicle safety.[19]

In coming to a conclusion on which regulation to put forward, the NHTSA employs a cost-benefit analysis that is mandated by Executive Orders 12866 and 13563.[20] The Executive Orders call upon the agency to "assess the costs and benefits of a rulemaking, including those costs and benefits that are difficult to quantify and, unless prohibited by statute, choose the regulatory alternative that maximizes net benefits."[21] Further, Executive Order 13563 states that the agency shall "use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible . . . [and] may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impact."[22]

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17 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, WHO WE ARE AND WHAT WE DO.

18 *Id.*

19 *Id.*

20 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19,184.

21 *Id.*

22 *Id.* at 19,235.

B. *Regulatory Precedent*

The NHTSA has been involved in several legal disputes concerning the agency's regulations. It is important, in determining the legality of the rearview camera regulation, that one looks to relevant past cases adjudicated by courts of high authority. These cases have often included the NHTSA itself as a party to the litigation, or have still been instrumental in determining the proper amount of authority of a federal agency.

In one of the leading cases on administrative law used today, *Chevron U.S.A., Inc. v. Natural Resource Defense Council, Inc.*, the Supreme Court stated that, when reviewing an agency's construction of a statute, a court must consider two factors.[23] First, the court must determine if Congress has spoken directly toward the issue.[24] If Congress' intent is clear, then that settles the matter.[25] If Congress' intent is ambiguous, the court must determine whether the agency's interpretation is "based on a permissible construction of the statute."[26] Further, the Court stated that when the purpose of Congress' legislative delegation to a particular agency is implicit, the court "may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency."[27]

In *Motor Vehicle Mfrs. Ass's of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, the Supreme Court reviewed a rule by the NHTSA concerning certain crash protection requirements.[28] Applying the Motor Vehicle Safety Act, the Court stated that "motor vehicle safety standards are to be promulgated under the informal rulemaking procedures of § 553 of the Administrative Procedure Act . . . such standards therefore may be set aside if found to be 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.'"[29] The Court further elaborated on the 'arbitrary and capricious' standard by stating that an agency rule would be determined to be arbitrary and capricious if: "the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."[30]

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23 Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 842 (1984).
24 *Id.*
25 *Id.*
26 *Id.* at 843.
27 *Id.* at 844.
28 Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29 (1983).
29 *Id.* at 41.
30 *Id.* at 43.

While an agency does have a limited amount of leeway in how it interprets a specific statute, certain factors must be taken into account for each specific rule. Even if an agency were to draw a conclusion where, given the factors taken into account, the benefits outweighed the costs of a regulation, a regulation must be invalidated if a non-considered factor might have sufficiently altered the results.[31] In *H & H Tire Co. v. U.S. Dept. of Transp.*, the Seventh Circuit Court of Appeals stated that an agency "has an affirmative duty to inquire into and consider all relevant facts."[32] In that case, an independent tire retreader was successful in getting the court to strike down a federal safety standard set forth by the DOT because certain tests that were available to the Department that could have produced more accurate results were not conducted.[33]

Courts have often disputed the extent to which the economic effects of a regulation may be considered as a relevant factor. In *H & H Tire Co.*, the court stated "the fact that a government regulation may cause economic hardship to a party does not make such a regulation unreasonable."[34] However, in *National Truck Equipment Ass'n v. National Highway Traffic Safety Admin.*, the court offered a decision that concurred in part and dissented in part.[35] The court stated that "The economic effect of a regulation alone . . . cannot render a rule impracticable. If, however, as in this case the safety effects are in question because they are not clear, a large economic effect on the industry can render that standard impracticable."[36]

The greatest contrast to the court in *H & H Tire Co.*, though, came from the District of Columbia court of appeals in *National Tire Dealers & Retreaders Ass'n, Inc. v. Brinegar*.[37] The court reviewed a safety standard set forth by the Secretary of Transportation that the opposing party contended was economically infeasible.[38] The court stated that no proof was offered to show that compliance with the regulation would be economically practicable, therefore striking down the measure.[39] Since the economic costs of the rule would have been too great of a burden, the court ruled that the regulation qualified as 'arbitrary.'[40]

Finally, when reviewing a decision by an agency to revoke a specific regulation, a court must use the same 'arbitrary and capricious' standard

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31 H & H Tire Co. v. U.S. Dept. of Transp., 471 F.2d 350 (7th Cir. 1972).

32 *Id.* at 355.

33 *Id.*

34 *Id.* at 354.

35 National Truck Equipment Ass'n v. National Highway Traffic Safety Admin., 919 F.2d 1148 (6th Cir. 1990).

36 *Id.* at 1154.

37 National Tire Dealers and Retreaders Ass'n, Inc. v. Brinegar, 491 F.2d 31 (D.C. Cir. 1974).

38 *Id.*

39 *Id.* at 37.

40 *Id.*

that it employs when reviewing a newly created rule.[41] In *Motor Vehicle Mfrs. Ass'n of U.S.*, the Court noted that the Administrative Procedure Act "suggests no difference in the scope of judicial review depending upon the agency's action."[42] The Court continues, "just as an agency reasonably may decline to issue a safety standard if it is uncertain about its efficacy, an agency may also revoke a standard on the basis of serious uncertainties if supported by the record and reasonably explained."[43]

C. *Monetizable and Non-monetizable Costs and Benefits*

While federal courts have ruled on the requisite level of accuracy that accumulated data must adhere to in order to be properly factored into an agency's cost-benefit analysis, the courts have not directly addressed the potential inclusion of costs or benefits that are non-monetizable. Moreover, federal courts have not specifically elaborated on the elements that constitute a monetizable factor, versus those that do not. Therefore, by using non-monetizable benefits to justify the rearview camera regulation's sufficiency, the NHTSA proceeded to implement a regulation based on disputable authority.

Monetizable factors, for the purpose of calculating a cost-benefit analysis of a federal regulation, are costs and benefits that can be expressed, with some degree of certainty, in an amount that the average individual would value it at. A common point of contention regarding one's ability to monetize a certain cost or benefit is the necessary degree of specificity, or exactness, a calculation must contain. Arden Rowell, in an essay concerning the proposed rearview camera regulation, contends that the NHTSA should have been able to monetize the emotional impacts of the rule.[44] Rowell asserts, "treating these effects of the rearview rule as non-monetizable assumes that people are not willing to pay any money to secure those effects, and is likely to lead to significant undervaluation of the amount of money people are actually willing to pay for a regulation."[45] In other words, Rowell professes the belief that no matter how incommensurable a benefit may be, it should be monetized if people are willing to pay for it, or otherwise completely discarded from a cost-benefit analysis if it is non-monetizable.[46]

On the other hand, in response to Rowell, Melissa Luttrell argues that it would be impractical to force agencies to monetize every benefit for

41 Motor Vehicle Mfrs. Ass'n of U.S., 463 U.S. at 41.

42 *Id.*

43 *Id.*

44 Arden Rowell, *Partial Valuation in Cost-Benefit Analysis*, 64 ADMIN. L. REV. 723 (2012).

45 *Id.*

46 *Id.* at 731-32.

which there would be any willingness for individuals to pay.[47] Maintaining that many of these benefits would not be able to be properly monetized, Luttrell states that the decision of whether or not to monetize a certain benefit should be left to a respective agency.[48] Therefore, she asserts that an agency should maintain some level of subjectivity when evaluating the efficiency of a regulation, and retain the ability to take non-monetizable benefits into account.[49]

Overall, two aspects must be taken into consideration; (1) the practical ability of an agency to accurately monetize a cost or benefit; and (2) whether or not a cost or benefit that is non-monetizable could be included in an agency's cost-benefit analysis. As noted previously, the NHTSA determined that certain benefits were not monetizable, but still included them into the calculation. The analysis section of this comment will discuss whether or not future automobile innovation can be properly monetized, and, if not, whether they can be still be included based on the reasoning by the NHTSA regarding the rearview camera regulation.

D. *Rearview Camera Mandate*

Backover crashes annually result in approximately 267 fatalities and roughly 15,000 injuries.[50] Of those who are killed due to one of these incidents, almost one-third are children under the age of five, while elderly individuals above the age of 70 account for 26 percent of fatalities.[51] This dilemma, especially given the vulnerability of the victims involved, led to calls for the federal government to develop a regulation that would attempt to virtually eliminate backover crashes.

In 2007, Congress passed the Cameron Gulbransen Kids Transportation Safety Act (K.T. Safety Act), which directed the NHTSA "to expand the required field of view to enable the driver of a motor vehicle to detect areas behind the motor vehicle to reduce death and injury resulting from backing incidents, particularly incidents involving small children and disabled persons."[52] After considering several different options, in 2014 the NHTSA decided that requiring all motor vehicles under 10,000 pounds to be manufactured with rearview cameras maximized net benefits the most, given the costs and benefits of each option.[53] The timeline of the regulation is gradual. Automobile manufacturers must ensure that rearview cameras

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47 Melissa J. Luttrell, *Bentham at the OMB: A Response to Professor Rowell*, 64 ADMIN. L. REV. 1013, 1017 (2012).

48 *Id.*

49 *Id.* at 1017-18.

50 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19,180.

51 *Id.*

52 *Id.* at 19,178.

53 *Id.*

are installed in a certain amount of vehicles each year, with 100% of new vehicles under 10,000 pounds being covered by 2018.[54]

The NHTSA's research showed that, without the regulation, approximately 73% of all vehicles on the road would have been equipped with the rearview camera technology.[55] Therefore, the rule is meant to affect the remaining 27% of vehicles that would be operating without the technology.[56] The agency concluded that installing the technology on the additional 27% of vehicles would cost the automobile industry between $546 million to $620 million.[57]

Beginning in 2018, the regulation is expected to save anywhere from 13 to 15 lives per year, while also preventing roughly 1,200 injuries.[58] Aside from the monetized benefits of preventing fatalities and injuries, other monetized benefits that were incorporated include decreases in automobile damage and non-automobile property damage as a result of fewer collisions.[59] When these benefits are monetized, the regulation is expected to produce between $265 million and $396 million worth of net benefits.[60] This estimation, however, only includes the benefits that could be properly monetized.[61] Simply weighing the monetizable costs versus the monetizable benefits, the rule's costs clearly outweigh the benefits.

Under ordinary circumstances, the regulation's cost-benefit analysis would likely result in the rule being discarded. However, the agency contended that there were a significant amount of non-monetizable benefits associated with the regulation.[62] While agencies often include these non-quantifiable effects as part of the agency's overall analysis, they are usually clearly distinguished from the cost-benefit analysis on the monetizable effects. The unique aspect of the rearview camera regulation is that the NHTSA combined the non-monetizable benefits with the monetizable benefits, which was necessary to justify the rule's implementation.

The non-monetizable benefits of the rearview camera regulation largely include the severe emotion distress that would lessen if the regulation were implemented. Specifically, a disproportionate amount of the victims of backover crashes that would be saved who are either small children under the age of five or elderly individuals.[63] Therefore, the NHTSA argues that the benefits of saving these lives cannot be equated with saving the life of an average adult, as there is a greater societal need to

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54 *Id.* at 19,181.
55 *Id.* at 19,179.
56 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19,179.
57 *Id.*
58 *Id.* at 19,180.
59 *Id.*
60 *Id.*
61 *Id.*
62 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19,184.
63 *Id.*

reduce risk for those who are most vulnerable.[64] Further, the NHTSA noted that the relationship between those involved in a backover accident often increases the resulting emotional consequences.[65] For example, many of these instances occur in a situation where a parent accidently strikes his or her young child with the automobile, causing an amount of emotional distress that is extraordinarily difficult to monetize.[66] While not citing any specific court case, the agency contended that employing these distinct factors could be reconciled with the agency's statutory mandate.[67]

E. *Autonomous Vehicle Innovation*

The substantial costs of the rearview camera regulation placed on automobile manufacturers will nonetheless force them to divert many resources away from other investment opportunities. With the rapid expansion of autonomous features in motor vehicles, it is imperative that the potential development and regulation of autonomous vehicles is measured in order to best determine the harm on the industry that will result. Subsequently, one may attempt to provide an accurate representation of the costs that could be factored into the NHTSA's cost-benefit analysis of the rearview camera rule.

On September 19, 2016, the Obama administration released a set of regulatory guidelines that was meant to give those in the automobile industry an idea of the scope of regulation that self-driving cars will face in the future.[68] The guidelines presented several specific regulatory hurdles that manufacturers can expect to undergo, but also remained ambiguous regarding whether or not the federal government would require more impactful measures, such as mandating that all new autonomous vehicle systems receive approval from the NHTSA prior to commercial introduction.[69]

For regulatory purposes, vehicles containing automated features are placed on a scale ranging from level one to level four.[70] The higher the level, the greater amount of autonomous features the car contains.[71] For level one vehicles, only a limited amount of features within the vehicle are

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[64] *Id.*

[65] *Id.*

[66] *Id.*

[67] *Id.*

[68] Ryan Beene, *Government Autonomous Car Regulations are Out: Here's What It All Means*, AUTO WEEK, Sept. 20, 2016.

[69] *Id.*

[70] NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION RELEASES POLICY ON AUTOMATED VEHICLE DEVELOPMENT.

[71] *Id.*

automated, such as electronic stability control and pre-charged brakes.[72] Level two automobiles, like level one vehicles, are already legal to drive on public roads,[73] with the cars featuring functions such as adaptive cruise control and lane-assist, but require human drivers to take control of the car after a brief period of automated steering.[74] The regulations recently put forth by the federal government will most likely apply to level three vehicles,[75] which will contain significantly more automated functions and, at times, allow the driver to "cede full control of all safety-critical functions under certain traffic or environmental conditions and in those conditions to rely heavily on the vehicle to monitor for changes in those conditions requiring transition back to driver control.[76] Finally, level four vehicles are almost entirely automated.[77]

The presence of level four vehicles on public roads is likely not far off. The two main hurdles that the industry is facing today include financial and legal hurdles. Investment in autonomous vehicle research is highly expensive, causing the manufacturing industry to often look to the federal government as well as state and local governments for subsidies. Nonetheless, earlier in 2016 the Obama administration pledged nearly $4 billion for investment in self-driving cars.[78] Accordingly, funds for the 2017 fiscal year were diverted to the NHTSA for pilot programs that tested the viability of autonomous cars.[79] Secretary of Transportation Anthony Foxx, regarding the government investment, stated, "The President's proposal, with its combination of public and private effort, is the right way to drive innovation in the transportation sector."[80]

While the financial hurdle of obtaining the requisite funds for research is substantial by itself, regulators have been progressively willing to place regulations and guidelines on the industry that often make it more difficult to innovate.[81] Nonetheless, manufacturers have increasingly been victorious in legal battles with the federal government over these regulations on the industry.[82] In February of 2016, the NHTSA told Google, one of the leading manufacturers of autonomous vehicles, that an artificial intelligence system

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72 *Id.*

73 Beene, *supra* note 62.

74 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, *supra* note 64.

75 Beene, *supra* note 62.

76 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, *supra* note 64.

77 *Id.*

78 Keith Laing, Obama Pledges Nearly $4 Billion for Self-Driving Cars, The Hill (Jan. 14, 2016), http://thehill.com/policy/transportation/265932-obama-pledges-nearly-4-billion-for-self-driving-cars.

79 *Id.*

80 *Id.*

81 David Shepardson & Paul Lienart, *Exclusive: In Boost to Self-Driving Cars, U.S. Tells Google Computers can Qualify as Drivers*, REUTERS, Feb. 10, 2006.

82 *Id.*

could be considered a 'driver' under federal law.[83] Automobile manufacturers, at the time, were becoming frustrated with state governments that were implementing measures that made it more difficult for the vehicles to become legally operable on public roads.[84] The federal government, however, decided to settle the dispute, allowing innovation within the industry to progress without fear of repercussion.[85]

Altogether, 2016 was considered a "breakthrough" year for autonomous vehicles.[86] In addition to the previously stated triumphs, numerous automakers, including Ford and BMW, promised to develop fully autonomous vehicles within the next five years.[87] Uber put autonomous vehicles on the road in 2016 in two major cities, and Lyft stated that self-driving cars would conduct a majority of customer rides by 2021.[88] Further, several states, similar to the federal government, decided it would be best to take a hands-off approach and allow the market to develop.[89]

II. ANALYSIS

A. *Effects of Regulation on Innovation as a Whole*

Prior to determining the monetizability of the rearview camera's impact on autonomous vehicle innovation, it is imperative to evaluate the general impact that government regulation has on innovation, and why it is important to include a regulation's effect on innovation from a policy standpoint. Two significant studies, conducted by the Information Technology & Innovation Foundation (ITIF)[90] and the Manchester Institute of Innovation Research (MIIR),[91] respectively, address these subjects.

Luke A. Stewart, of the ITIF, explains that regulation can impact innovation in two separate manners, by causing either a *compliance burden* or *compliance innovation*.[92] Regulation that causes a compliance burden is typically the most harmful, as it causes a firm to divert time and money away from areas dedicated to research and development, and instead toward

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83 *Id.*

84 *Id.*

85 *Id.*

86 Daniel Nadler, *For Autonomous Vehicles, 2016 Was a Breakthrough Year*, INSTITUTIONAL INVESTOR, Dec. 22, 2016.

87 *Id.*

88 *Id.*

89 *Id.*

90 Luke A. Stewart, *The Impact of Regulation on Innovation in the United States: A Cross-Industry Literature Review*, INFORMATION TECHNOLOGY& INNOVATION FOUNDATION, June, 2010.

91 Knut Blind, *The Impact of Regulation on Innovation*, MANCHESTER INSTITUTE OF INNOVATION RESEARCH, Jan., 2012.

92 Stewart, *supra* note 90 at 2.

ensuring full compliance with the newly implemented law.[93] Nevertheless, not all regulation directly causes resources to be diverted from innovative projects.[94] Compliance innovation occurs when a firm successfully innovates its product in order to comply with a specific regulation.[95] Regulation may therefore have a positive impact by spurring new improvement within an industry.[96] However, that insinuation would be based on two assumptions; (1) that a firm, for some reason, did not adhere to the market-driven demand advocating for the specific innovation; and (2) that the specific compliance innovation is the most optimal step a firm could pursue, as opposed to various other innovative approaches.

Nonetheless, even while defending the positive impact of government regulation on innovation in many sectors of the economy, Stewart's research on regulation's effect on innovation within the automobile industry is largely mixed.[97] Altogether, Stewart concludes, "regardless the impact of regulation on innovation in general, if regulators simply place innovation at the forefront of their policy analysis along with distributional, fairness, and environmental concerns, then the United States will undoubtedly see a marked and sustained improvement in its innovative potential."[98]

In the MIIR study, Knut Blind also focuses on several different regulated industries, and cites earlier studies that take an even dimmer view of government regulation's effect on innovation within the automobile industry.[99] Blind first cites one study, conducted in 2008, relating to the effects of the EU End of Life Vehicles Directive (ELVD).[100] The study noted that the ELVD "has driven regulation effectively diverting innovative capacity into short-term, incremental technological trajectories rather than into more radical, sustainable direction product innovation."[101] Additionally, Blind cites a 2006 study on the development of electric vehicle technologies, where researchers found that "while emissions regulations effectively promoted incremental innovation in internal combustion engine vehicles, they have not stimulated the radical innovations required for the successful commercialization of electric vehicles."[102]

After concluding his research, Blind compiles a list of various applicable policies that he suggests regulators should develop.[103] Among these is an advisement to regulatory agencies to "Include innovation in ex

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93 *Id.*
94 *Id.*
95 *Id.*
96 *Id.*
97 *Id.* at 12-13.
98 Stewart, *supra* note 90 at 23.
99 Blind, *supra* note 91 at 14.
100 *Id.*
101 *Id.*
102 *Id.*
103 *Id.* at 26-27.

ante and ex post regulatory impact assessments."[104] As an example, Blind cites the steps taken by the European Commission, which recently decided to include these aspects as part of a regulation's cost-benefit analysis.[105]

Finally, future problems that the rearview camera regulation might face, as it relates to stymying future autonomous vehicle innovation, could be similar to the difficulties incurred by medical regulations. In a study conducted by the RAND Corporation, several authors contribute to researching how regulation concerning prescription drugs has harmed innovation within the field.[106] Similar to the previous studies, the researchers found that while a regulation implemented to solve a contemporary problem may have its share of short-term benefits, the long-term costs can significantly outweigh these benefits.[107] In that instance, potential live-saving drugs that would require deliberate and consistent funds to develop could be delayed for future generations.[108]

A separate study conducted by researchers at Duke University reached a similar conclusion regarding the innovation of new drugs in the pharmaceutical industry.[109] The authors of the study conclude that the factor "which has lowered U.S. productivity at a significantly more rapid rate, is the increased regulation resulting from the 1962 amendments . . . we estimate that the 1962 amendments have probably, at a minimum, doubled the cost of a new entity."[110]

The aforementioned studies help display the distinction between the short-term consequences and the long-term consequences that many well-intended government regulations create. Regulations that attempt to solve a matter concerning consumer safety too often result in the rule backfiring, therefore running contrary to the purpose that it was supposed to serve.

B. *Impact of Rearview Camera Regulation on Automobile Innovation*

As of 2016, 33 major corporations, ranging from automobile manufacturers to technology companies, are currently investing in the advancement of self-driving cars and automotive technology.[111] From

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104 *Id.* at 27.

105 Blind, *supra* note 91 at 27.

106 Dana Goldman, Nareej Sood, Robert Lempert, Ze Cong, Han de Vries, Italo Gutierrez, *Drug Cost Regulations Would Hurt Future Medical Innovation; Lower Copays a Better Option*, RAND CORPORATION, Dec. 16, 2008.

107 Goldman, *supra* note 106 at 36.

108 *Id.*

109 Henry G. Grabowski, John M. Vernon, &Lacy Glenn Thomas, *Estimating the Effects of Regulation On Innovation: An International Comparative Analysis of the Pharmaceutical Industry*, DUKE UNIVERSITY.

110 *Id.* at 159.

111 *33 Corporations Working on Autonomous Vehicles*, CB INSIGHTS, Aug. 11, 2016.

manufacturing stalwarts such as Ford and GM, to companies such as Google and Apple, a surplus of the world's largest corporations have determined that the autonomous vehicle industry provides an opportunity for a heavy return on investment.[112]

Accordingly, many of these corporations have contended that DOT regulation on self-driving cars, often put in place to ensure future consumer safety, have stifled their ability to continue innovation and enhance consumer safety using the new technology.[113] Just a few months prior to the Obama administration's guidelines for autonomous vehicle regulation were released, investors such as Lyft, GM, and Google all pled with the federal government to take a light approach toward regulating the industry.[114] With GM and Lyft recently investing approximately $1.5 billion into self-driving car technology, the companies stated that fully autonomous vehicles could only be a few years away from obtaining regulators' consent to have access to public roads, negating many industry experts who believe that the vehicles are still decades away from becoming fully legalized.[115] Due to the expedited innovation, investors contend that drastic improvements in vehicle safety could be coming in the near future, but that they would be delayed with increased regulation.[116]

Increased regulation that directly impacts autonomous vehicles, however, is not the only type of regulation that can stifle innovation within the industry. Two manners in which government regulation and other legislation often suppress future innovation include increasing the costs of research and development for those within the industry, and implementing new legal hurdles that manufacturers must overcome. The rearview camera regulation at hand clearly has the effect of increasing costs for automobile manufacturers, and could also present future legal obstacles.

According to the NHTSA's own analysis, even when only the costs of supplying the remaining 23% of vehicles with rearview cameras are included, the regulation would require $620 million in expenditures by the automobile industry. While it is difficult to determine exactly how much of this money would have been used by manufacturers in order to further advance autonomous vehicle technology, it can be assumed that a significant portion of the expenditures would have been focused toward the sector that is rapidly expanding. The diversion of these funds toward the implementation of rearview cameras likely delayed, at least to some extent, the progression of autonomous vehicle technology.

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112 *Id.*

113 Lauren Hepler, *Lyft, GM, Google Ask Congress for Hands-Off Rules on Self-Driving Cars*, GREEN BIZ, Mar. 16, 2016.

114 *Id.*

115 *Id.*

116 *Id.*

Additional costs that manufacturers could incur due to the rearview camera regulation might come in the indirect form of legal battles. New regulations almost always present an opportunity for a manufacturer to be held liable for a certain malfunction. If the technology within the rearview cameras were to contain a fault, this would bring further financial costs to a supplier. Furthermore, due to the longevity of contended litigation, the amount of time that will likely be diverted away from producing new autonomous technology will create yet another obstacle.

Specifically concerning the rearview camera regulation, the continuous delay of the rule, as well as the lack of the rule's modernity, could have also played a role in stifling innovation.[117] The K.T. Safety Act, which obliged the NHTSA to come up with a solution to decrease the amount of fatalities from backover crashes, was passed by Congress seven years before the final NHTSA rule, and eleven years before the rule was fully implemented.[118] The final regulation was delayed several times, to the point that, in 2013, advocates of the rule's implementation sued the DOT in order to force the agency to develop a final resolution.[119] Nonetheless, the final regulation's nearly three-year delay, alone, came at a cost to automakers of approximately $2.7 billion.[120]

When the K.T. Safety Act was passed, rearview camera technology was in its initial phases. If the rule requiring rearview cameras had been implemented at that time, the appropriate timing of the measure would have lessened the negative impact. However, by 2018, the rule may come only a couple years before the technology is rendered useless, as autonomous vehicles that perform the same function may become available. Regarding the recently proposed regulations on autonomous vehicles, one expert on the automobile industry stated that "technology is changing so rapidly that any rule we write today would likely be woefully irrelevant by the time it took effect years later."[121] Similarly, the rearview camera regulation's delay caused the rule to be implemented at a time when the technology might soon be rendered useless. The departure from the normal innovative course that a manufacturer would go through likely further delays the progression of new technology.[122]

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117 Nicole Wakelin, *Slow Pace of Regulatory Change Threatens Automotive Innovation*, AUTOMOTIVE IT NEWS, June 15, 2014.

118 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19184.

119 Angela Greiling Keane, *Delayed Backup-Camera Rule for Cars Sees Court Challenge,* BLOOMBERG, Sept. 25, 2013.

120 *Id.*

121 Grant Broadhurst, *New Driverless Car Rules Will Stifle Innovation, Cost Lives*, REAL CLEAR POLICY, Sept. 23, 2016.

122 Wakelin, *supra* note 87.

Furthermore, some maintain that the average person's satisfaction with certain technology can stifle innovation.[123] Ethan Zuckerman of MIT discussed this dilemma as it relates to the financial industry.[124] Certain technology that makes it easier to conduct financial transactions had existed in Kenya for approximately a decade before the technology finally became popular in the United States.[125] He believes that this is because Americans, in general, were already satisfied with the technology that they had at the time, compared with the miniscule financial resources that were available in Kenya.[126] Similarly, one may suggest that if individuals are satisfied with the assistance of rearview cameras, they might not be as eager to adopt newer, safer technology in the form of autonomous vehicles. Therefore, the regulation could affect consumer preferences to indirectly slow down automobile innovation.

C. *Innovation Statistics*

In a study conducted by the Victoria Transport Policy Institute, Todd Litman predicts the time of arrival of certain autonomous vehicle features, and provides a detailed analysis of the potential benefits and of each one.[127] The benefits of these technological advances include reduced driver stress, reduced driver costs, mobility for non-drivers, increased safety, increased road capacity, more efficient parking, and a reduction in pollution.[128]

In 2014, car crashes accounted for 32,675 fatalities.[129] Christopher Hart, Chairman of the National Transportation Safety Board (NTSB), stated that driverless cars can "save many, if not most of the 32,000 lives that are lost every year on our streets and highways."[130] Even the NHTSA stated that autonomous vehicles will provide "completely new possibilities for improving highway safety, increasing environmental benefits, expanding mobility, and creating new economic opportunities for jobs and investment."[131]

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123 Ethan Zuckerman, *How "Good Enough" Technology Can Stifle Innovation*, JOURNALIST'S RESOURCE, Jan. 6, 2015.

124 *Id.*

125 *Id.*

126 *Id.*

127 Todd Litman, Autonomous Vehicle Implementation Predictions: Implications for Transport Planning, VICTORIA TRANSPORT POLICY INSTITUTE (2016).

128 *Id.*

129 Ashlee Kieler, *NHTSA: Self-Driving Cars Need to be Twice as Safe in Order to Reduce Traffic Deaths*, CONSUMERIST, June 8, 2016.

130 Joe Setyon, *NTSB Chairman: Driverless Cars Could Save 32,000 Lives a Year*, CNS NEWS, July 1, 2016.

131 Alex Davies, *Self-Driving Cars Will Make US Want Fewer Cars*, WIRED, Mar. 9, 2015.

Overall, autonomous vehicle technology is simply a manner in which safety will progress, as it has for the past few decades. In 1970, when the population of the United States was significantly less than it is today, car crashes accounted for approximately 60,000 fatalities.[132] Increased use of safety features such as seat belts and airbags greatly contributed to the decline.[133] The significance of future technology, though, is that the reduction in automobile fatalities could be expedited to a remarkable degree.[134]

Researchers currently estimate that, within the next few decades, driverless cars could reduce traffic fatalities by up to 90 percent, accounting for nearly 30,000 lives.[135] While these numbers might sound generous at first thought, many of the autonomous features currently being used in automobiles have proven to increase consumer safety.[136] The Insurance Institute for Highway Safety (IIHS) reported a seven percent reduction in crashes among cars that were equipped with a basic forward-collision warning system.[137] When cars with the forward-collision warning system as well as automatic braking features are taken into account, the reduction in fatalities goes from seven percent to almost fifteen percent.[138]

Studies conducted on the potential costs of autonomous vehicles have only furthered the notion that autonomous vehicles would provide for an almost guaranteed safe manner of transportation.[139] Between 2009 and August 2016, Google's autonomous cars had driven over one million miles in full automation, resulting in only 16 accidents.[140] Out of these 16 accidents, none of them were caused by Google's vehicle.[141] With the precedent in safety reduction that these types of features have proven to be directly responsible for, one can only expect that increasing the amount of autonomous technology within motor vehicles will continue to gradually reduce related fatalities.[142]

Nevertheless, the safety risks associated with autonomous vehicles are often overrepresented. In May of 2016, when a motorist who was relying on autonomous vehicle technology was killed due to a failure in Tesla's vehicle technology, the story received extensive media coverage, and led

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132 Adrienne LaFrance, *Self-Driving Cars Could Save 300,000 Lives Per Decade in America*, THE ATLANTIC, Sept. 29, 2015.

133 *Id.*

134 *Id.*

135 *Id.*

136 Davies, *supra* note 101.

137 *Id.*

138 *Id.*

139 LaFrance, *supra* note 102.

140 *Id.*

141 *Id.*

142 Davies, *supra* note 101.

many to claim that stronger regulation is needed.[143] As the empirical evidence suggests, though, incidents such as this one are miniscule relative to the dangers of vehicles without any automated features.[144] In fact, after the incident, Tesla CEO Elon Must stated "approximately half a million people would have been saved if the Tesla autopilot was universally available."[145]

The benefits of autonomous vehicle technology would not be limited to a reduction in motor vehicle deaths. By 2050, it is estimated that we will only need 75 percent of the current space that is used for parking vehicles.[146] Since autonomous cars would be able to park closer together than human-operated vehicles, approximately 5.7 billion square meters of space would then be usable for other economic purposes.[147] Health care bills, as a whole, when a 90 percent reduction in fatalities is assumed, would be reduced by $180 billion.[148] Furthermore, the fact that humans would no longer need to operate their vehicle at all times would allow them to conduct various activities while driving. If, for example, an individual had to commute an hour to work and then another hour back home, he could choose to spend two hours less in the office by working during both commutes.

While possibly non-monetizable, statistics on the individuals that the costs of the rearview camera regulation will affect the most should be included as well. A study conducted by the Mercatus Center shows that those at the lower end of the economic spectrum will bear the burden of a disproportionate amount of the costs.[149] The increased cost of manufacturing a vehicle will likely be passed on to consumers, and the potential increase in price of up to $200 will harm low-income individuals the most.[150] If the NHTSA justified the rearview camera regulation by including the potentially non-monetizable benefit of saving those who are most vulnerable in society, costs of the regulation that affect the most vulnerable should be taken into account as well.

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[143] Doron Levin, Tesla Fatality Reflects Need for Stronger Regulatory Authority of Driverless Tech, The Street, July 5, 2016, https://www.thestreet.com/story/13629103/1/tesla-fatality-reflects-need-for-stronger-regulatory-authority-of-driverless-tech.html.

[144] LaFrance, supra note 102.

[145] Elon Musk Says That About '500,000 People Would Have Been Saved (last year) if Tesla's Autopilot was Universally Available', Electrek, July 5, 2016, https://electrek.co/2016/07/05/elon-musk-tesla-autopilot-save-life/.

[146] Davies, *supra* note 101.

[147] *Id.*

[148] *Id.*

[149] James Broughel, Delaying the Rearview Camera Rule is Good for the Poor, MERCATUS CENTER AT GEORGE MASON UNIVERSITY (2013).

[150] *Id.*

D. *Innovation as a Monetizable Factor*

As mentioned previously, in *Motor Vehicle Mfrs. Ass's of U.S.*, the Supreme Court stated that an agency regulation can be discarded for any of three separate violations, including when the agency; (1) relied on factors which Congress did not intend for it to consider; (2) failed to consider an important aspect of the problem; or (3) offered an explanation for its decision that runs counter to evidence.[151] Applying the Court's logic, one can argue that the rearview camera regulation's impact on future automobile innovation is an imperative aspect of the cost-benefit analysis, therefore causing the rearview camera rule to defy statutory obligations by not including this element.[152]

Through the application of several of the aforementioned studies regarding future automobile innovation's benefits and the costs that the rearview camera regulation will bring, the NHTSA would likely have the ability to conduct a cost-benefit analysis that includes the rule's impact on innovation in the same manner that it conducted the original study. In the NHTSA's cost-benefit analysis on the regulation, the agency used the standard measurement to monetize the value of a human life, with each life saved translating into a $9.1 million benefit.[153] To be properly monetized, the negative impact of the regulation would likely need to be measured in terms of the amount of time that the oncoming benefits from innovation would be delayed, then subtracting the benefits that the regulation would bring during the respective time period.

As an example, imagine that the benefits of autonomous vehicle innovation result in saving approximately 1,200 lives per year (or 100 lives per month), and the regulation is determined to delay innovative progress by approximately one month. A potential methodology that could be used to determine the total costs on future innovation would be to subtract the number of lives saved in a typical month from the rearview camera rule, for example, 10, from the amount of lives that would be saved in a specific month if automobile innovation were not delayed. If the statistics in the given example were true, a net loss of 90 lives would be added to the cost of implementing the regulation.

The key to being able to calculate the expanded monetized cost of the regulation would therefore be the ability to determine the delayed time period that the regulation would cause due to diverted funds and, then, the difference between the number of lives saved between the regulation and those saved through innovation during that specific time period. If this could be calculated, the cost to future innovation could be monetized, and

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151 Motor Vehicle Mfrs. Ass'n of U.S., 463 U.S. at 43.

152 *Id.*

153 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19,238.

would not have to overcome the hurdle of being included as a non-monetizable cost. While automobile innovation could save tens of thousands of lives in the coming years,[154] the rearview camera regulation is only predicted to save between 13 and 15 lives per year.[155] While each incident involving a backover accident is nonetheless a tragic occurrence, approximately twice as many people in American die each year from falling out of bed, and four times as many people die from falling off of household furniture.[156] If the data presented in the studies on future automobile innovation were accurate, and the rearview camera rule caused any significant delay of the autonomous technology, the magnitude of safety benefits presented by innovation could easily spike the total cost of the regulation.

E. *Innovation as a Non-monetizable Factor*

Due to the precedent set in the rearview camera regulation, one could make the argument that the rule's impact on future automobile innovation should be included even if the costs could not be accurately monetized. While the cost-benefit analysis of the regulation only included emotional externalities as part of the addition, the inclusion of any non-monetizable benefits would expand the boundaries even further as to what constitutes a relevant factor to analyze.[157]

Nonetheless, the benefits of autonomous vehicle innovation contain some of the same benefits that are included as non-monetizable benefits in the rearview camera regulation.[158] As noted previously, those who may suffer the most significant negative consequences as a result of the regulation are those who are most vulnerable in society.[159] If preventing the added emotional distress due to the age of a victim of backover accidents is included, it would only follow that preventing the additional emotional anguish of those who are less financially fortunate should be incorporated as well.

The main dilemma posed by the NHTSA's inclusion of non-monetizable benefits to justify the implementation of the rearview camera rule is the subjectivity that ensues. If the monetizability of an element is not the deciding factor to determine its inclusion, then the only somewhat consistent manner to decide which factors are included would be to

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154 LaFrance, *supra* note 102.

155 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19,180.

156 Zenon Evans, *Your Next Car Will Have a Rearview Camera, Whether You Want One or Not*, REASON, Apr. 1, 2014.

157 Federal Motor Vehicle Safety Standards; Rear Visibility, 79 Fed. Reg. at 19,180.

158 *Id.*

159 Broughel, *supra* note 119.

establish each element's relevancy, which would be subject to each individual's own bias and prejudices. Nevertheless, if non-monetizable factors are admitted, the question of how to determine their respective values remains ambiguous.

F. *Counterarguments*

Two contentions that could be made against the inclusion of future innovation benefits into the cost-benefit analysis of the rearview camera regulation are that the factor's inclusion would impractically expand the amount of factors that must be taken into account, and that the calculation of costs and benefits would be too unreliable to be included. While federal courts clearly state that only relevant factors must be taken into consideration when performing the cost-benefit analysis of a regulation, a clear definition of the term 'relevant' has not been provided.

An opponent could contend that, if the safety effects of potential innovation within the automobile industry are taken into account, that could lead toward a slippery slope, whereby an infinite number of factors would be necessary to accurately draw a conclusion. Future innovation, specifically the extent of which automation will play a role in automobiles at a certain point in time, could result in a myriad of economic effects. Therefore, one could claim that it would be impossible to predict which sectors of the economy would be altered significantly enough in order to be placed under consideration.

However, a similar argument could be made when attempting to calculate the direct economic effects of a specific regulation. The argument presented by this comment is that an agency should expand the scope of cost-benefit analysis to include the costs and benefits to the transportation industry for an extended period of time. Nonetheless, an arbitrary line must be drawn at some point along the timeline in order to complete a cost-benefit analysis. Including the effects of a regulation from further into the future simply lengthens the arbitrary line, but the agency would be left to perform the same basic functions.

Due to the enormous scope of costs and benefits that including future innovation could bring to the analysis, though, it is foreseeable that the consequences would be difficult to determine. After all, one cannot be sure of the future regulations that will be put in place by the federal government that could also impact the industry. However, much of the determining factor of whether or not the predictions would be accurate would, nevertheless, be wielded by the DOT itself. The primary influence of the potential inaccuracy of the predictions would be regulations created by agencies within the DOT. Unless the economic climate of the country is drastically altered, the reliability of the proposed extension of the analysis should not be questioned any more so than the reliability of current cost-benefit analysis.

Further, an opponent could also allude to the availability of fully autonomous vehicles having several drawbacks on the economy. Concerns regarding the future of the industry include the unsustainability of professional driving as a career, security concerns, and the increase in traffic and pollution.[160] To the contrary of government regulation, though, a market economy allows for the cumulative calculation of positive and negative consequences to determine whether or not an industry will be sustainable. If the economic effects, without significant alteration due to regulation, resulted in a scenario where the net costs outweighed the net benefits, the industry would not be able to survive.

CONCLUSION

The automobile industry will soon undergo somewhat of a complete transformation. Autonomous vehicle technology is rapidly progressing, improving automobile safety each year. The NHTSA's decision to implement a rule that would require nearly all vehicles on the road to have rearview cameras will result in a costly regulation that will likely divert resources away from further investment in self-driving cars. Due to the enormous disparity between the consumer safety impact of the rearview camera regulation and the impact of autonomous vehicle development, the NHTSA should have included the regulation's impact on autonomous vehicle innovation as a relevant factor in its cost-benefit analysis, and therefore rescinded the regulation in order to allow the maximum net benefit to occur. Whether or not the benefits from future innovation have the ability to be fully monetized, the precedent set by the NHTSA to include non-monetizable factors to justify the implementation of a regulation should allow for a wider scope of costs and benefits to be afforded the same legal treatment. As the NHTSA's foremost purpose is to enhance the safety of those on the road, the agency should only implement rules that, when all relevant factors are taken into account, would clearly benefit the overall safety of individuals.

[160] Bernard Meyerson, *Face it, You're a Worse Driver than an Autonomous Car*, GE REPORTS, Aug. 8, 2016.

STUCK IN THE FIFTIES: HOW THE TAX CODE INCENTIVIZES STEREOTYPICAL FAMILY VALUES THROUGH MARRIAGE INEQUITIES

*Samantha Trussell**

INTRODUCTION

Imagine two married couples, Couple A and Couple B. Couple A consists of two working spouses and Couple B consists of one spouse who works and one who stays at home. Both couples have a gross income of $120,000 and each couple will receive either the marriage penalty or marriage bonus. That is, one of these couples will have to pay more in federal income taxes than the other couple, even though in terms of gross income and marital status they are identical.

The marriage penalty occurs when two individuals after marriage have to pay more money in federal income taxes than they would have if they had remained single.[1] The marriage bonus, by contrast, occurs when a couple after marriage pays less in federal income taxes than if they had remained single.[2] This commonly occurs in single-earner couples, like Couple B, because the one working individual is moved from the less favorable single bracket into the more favorable joint bracket after marriage. Therefore, of the two couples, Couple A—consisting of two working spouses—will receive the marriage penalty and will have to pay more in federal income taxes than Couple B despite being equal in terms of gross income and marital status; this is a marriage inequity because the tax code treats Couple B more favorably than Couple A. Furthermore, the marriage penalty and marriage bonus are only the beginning of the inequities that will occur between Couple A and Couple B because of the tax code.

Once Couple A and Couple B have children, another marriage inequity will occur in the form of childcare. While Couple A—consisting of two working spouses—will have to pay for childcare, Couple B will not have to pay for childcare because of the domestic spouse. This is a form of

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* J.D., Antonin Scalia Law School at George Mason University, 2018. I would like to thank the JOURNAL OF LAW, ECONOMICS & POLICY for the opportunity and assistance in publishing this comment, and my family and friends for their constant love and support.

[1] Lawrence Zelenak, *Doing Something about Marriage Penalties: A Guide for the Perplexed*, 54 TAX L. REV. 1, 1 (2000).

[2] *Id.* at 24.

imputed income.[3] Imputed income consists of the income received from doing things for oneself instead of paying for them (such as taking care of one's own children); however, it is not included in calculating gross income for tax purposes.[4] Therefore, even though Couples A and B are virtually identical in terms of gross income and marital status, Couple A is further penalized because it will have to pay for the childcare in addition to the same amount of federal income taxes as Couple B. This is another marriage inequity that the working couple will suffer.

It is through the inequities of not taxing imputed income and increasing marriage penalties that the tax code incentivizes stereotypical family values. When the Internal Revenue Code (the "tax code") was first instituted, families consisted of the working husband and stay-at-home mother[5]; this was the traditional family. By contrast, today most married couples consist of two working spouses, but due to the rising costs of childcare many married couples will decide that the benefits of the second income are not worth the price of childcare and decide that one spouse needs to stay at home.[6] Therefore, there is a return to the traditional notion of family because it is generally the woman who decides to give up her job and become the stay-at-home mother.[7]

While the IRS has instituted credits to help alleviate the cost of childcare, these do not meet the requirements of providing childcare today.[8] The Child Care credit only allows for $3,000 for one child and $6,000 for two children.[9] However, childcare can range anywhere from $500 to $1,500 a month.[10] The credit, therefore, does not alleviate the cost. The Dependent Care Assistance Program is another program instituted to help alleviate the cost of childcare. However, only $5,000 is deductible as a

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[3] Sara J. Buehler, *Child Care Tax Credits, The Child Tax Credit, and the Taxpayer Relief Act of 1997: Congress' Missed Opportunity to Provide Parents Needed Relief From the Astronomical Costs of Child Care*, 9 HASTINGS WOMEN'S L.J. 189, 196 (1998).

[4] *Id.*

[5] Lauren Pignataro, *How a Secondary Earner Deduction will Reduce Gender Bias in the U.S. Tax Code*, 39 N.Y.U. REV. L. & SOC. CHANGE 245, 247 (2015). *See generally* Brigid Schulte, *Unlike in the 1950s, There is No Typical US Family Today*, THE WASHINGTON POST (September 4, 2014), https://www.washingtonpost.com/news/local/wp/2014/09/04/for-the-first-time-since-the-1950s-there-is-no-typical-u-s-family/?noredirect=on&utm_term=.38cc8aba29c8, ("The iconic 1950s family of the breadwinner father going off to work and caregiving mother taking care of the homefront…"); Sharon R. Cohany and Emy Sok, *Trends in Labor Force Participation of Married Mothers of Infants*, BUREAU OF LAB. STAT. (Feb. 2007), https://stats.bls.gov/opub/mlr/2007/02/art2full.pdf, ("In 1948, only 17 percent of married mothers were in the labor force.").

[6] *See* Buehler, *supra* note 3, at 189-90.

[7] *See* Pignataro, *supra* note 5, at 261; Margaret Ryznar, *To Work or Not to Work? The Immortal Tax Disincentives for Married Women*, 13 LEWIS & CLARK L. REV. 921, 924-25 (2009).

[8] Child Care Aware of America, *Parents and the High Cost of Child Care: 2015 Report* 6 (2015), https://files.eric.ed.gov/fulltext/ED562501.pdf.

[9] 26 U.S.C. § 21(c).

[10] *See* Child Care Aware of America, *supra* note 8.

business expense, and not all employers provide it to their employees.[11] This Comment will argue that a business deduction would be a more equitable solution to address the issue of the childcare inefficiencies that occur between single- and dual earner-couples.

Another solution that this Comment proposes to resolve the inequities that occur between single earner and dual earner married couples is rate structure shifting. Rather than try to calculate the imputed income that the single-earner couple is accruing, rate structure shifting would instead shift Couple B into the head of household rate structure. Because the single-earner couple only has one spouse working, the domestic spouse is effectually another dependent who contributes no monetary relief to the household. However, because of the imputed income from childcare, Couple B receives a benefit that Couple A does not. Therefore, by shifting Couple B into the less favorable head of household bracket, the single- and dual-earner couples are put on more even footing.

Part One of this Comment will delve into the history of the federal income tax system and the inception of the marriage penalty and marriage bonus. Part Two will analyze the inequities that occur between Couples A and B in the form of imputed income and childcare. In Part Three this Comment will argue that the federal income tax code instituted in 1969 does not meet the needs of today's society and is instead incentivizing a form of stereotypical family values that is out of place in our modern society. Finally, in Part Four, this Comment will critique court precedent and analyze the solutions that other theorists have suggested to resolve the marriage penalty/marriage bonus dilemma and will instead suggest that a complete business deduction for childcare or shifting single-earner married couples into the head of household rate structure will address the problem more equitably.

I. BACKGROUND INFORMATION

A. *A Brief History of the Federal Income Tax Rate Structure*

As the tax system developed in the United States, single individuals and married couples were taxed at the same rate structure for federal income tax purposes[12] (see Table 1 for an illustration of the rate structures prior to 1955). Because of this, many married couples used income splitting as a method to evade higher taxes.[13] Income splitting occurs when spouses

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11 26 U.S.C. § 129(a)(2)(A).

12 Jeannette Anderson Winn & Marshall Winn, *Till Death Do We Split: Married Couples and Single Persons under the Individual Income Tax*, 34 S.C. L. REV. 829, 829-34 (1983).

13 *Id.* at 833.

split their gross income amongst themselves so that they are taxed at lower rate brackets.[14] However, the Supreme Court did not favor income splitting.

Table 1: 1949 Tax Rate Structure and Brackets				
Married Filing Separately		**Married Filing Jointly**	**Single**	**Head of Household**
Marginal Tax Rate	**Tax Brackets**	*** Rates and Brackets apply to all taxpayers.** [15]		
20%	$0-$2,000			
22%	$2,000-$4,000			
26%	$4,000-$6,000			
30%	$6,000-$8,000			
34%	$8,000-$10,000			
38%	$10,000-$12,000			

In 1930, the Supreme Court prohibited the practice of income splitting in *Lucas v. Earl*.[16] The Court held that it was the husband who earned the wages and, therefore, he could not assign part of his income to his wife to evade taxes.[17] However, in the famous case of *Poe v. Seaborn* the Supreme Court changed its stance on income splitting and held that community property was divisible amongst spouses.[18] In that case, the husband and wife each filed separate tax returns and split the husband's salary between themselves, even though the wife made no money herself.[19] The Court held that because Washington was a community property state, the wife had a vested fifty percent interest in the property.[20] Therefore, the income splitting was appropriate. As a result of *Poe v. Seaborn*, income splitting was allowed for community property states, but not common law

14 Shari Motro, *A New I Do: Towards a Marriage-Neutral Income Tax*, 91 IOWA L.R. 1509, 1512 (2006).

15 *Federal Individual Income Tax Rates History, Nominal Dollars Income Years 1913-2013*, TAX FOUNDATION (2013), http://taxfoundation.org/sites/default/files/docs/fed_individual_rate_history_nominal.pdf.

16 Lucas v. Earl, 281 U.S. 111, 114-15 (1930).

17 "However the matter might stand between husband and wife he was the only party to the contracts by which the salary and fees were earned." *Id.* at 114.

18 "It is clear the wife has, in Washington, a vested property right in the community property, equal with that of her husband; and in the income of the community, including salaries or wages of either husband or wife, or both." Poe v. Seaborn, 282 U.S. 101, 111 (1930).

19 *Id.*

20 *Id.* at 111-12, 118.

jurisdictions.[21] Thus, there was an inequity amongst jurisdictions that needed to be resolved because married couples in common law states began to complain about the unfairness of only married couples in community property states being allowed to lower their taxes.[22]

In response to *Poe v. Seaborn*, Congress, for the first time, had to step in and resolve tax issues the Courts and the Commissioner of Revenue had previously resolved.[23] Congress passed the Revenue Act of 1948, which created the joint tax return that allowed married couples to combine their annual incomes to be taxed together.[24] (See Table 2).

Table 2: 1955 Tax Rate Structure and Brackets						
Married Filing Jointly		**Married Filing Separately**		**Single**	**Head of Household**	
Marginal Tax Rate	**Tax Brackets**	**Marginal Tax Rate**	**Tax Brackets**	*** Same as Married Filing Separately.**[25]	**Marginal Tax Rate**	**Tax Brackets**
20%	$0-$4,000	20%	$2,000		20%	$2,000
22%	$4,000-$8,000	22%	$2,000-$4,000		21%	$2,000-$4,000
26%	$8,000-$12,000	26%	$4,000-$6,000		26%	$6,000-$8,000
30%	$12,000-$16,000	30%	$6,000-$8,000		30%	$8,000-$10,000

While Congress made income splitting legal amongst all states with the Act, another problem emerged—the so called "singles' penalty" that needed to be resolved.[26] The single's penalty occurred because single individuals complained that allowing married couples to split their income was unfair to single individuals who had to pay higher tax rates even though they were making the same amount of money as the married person who was allowed to split their income.[27] In 1969 Congress instituted a single's tax relief and widened the brackets for singles to 60% of the joint return widths.[28] (See Table 3). Again, Congress was able to resolve an inequity in the tax code. However, while widening the brackets fixed the

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21 *Id.*

22 *See* Winn, *supra* note 13, at 833.

23 "The problem of attribution of income within the family was left to the Commissioner and the courts until 1948." *Id.* at 830.

24 *Id.* at 832.

25 *Id.*

26 *See* Zelenak, *supra* note 1, at 5-6.

27 *Id.* at 36.

28 *Id.* at 6.

singles' penalty, marriage penalties were a consequence.[29] Marriage penalties are an inequity that still exists in our present day tax code.

Table 3: 1971 Tax Rate Structure and Brackets [30]							
Married Filing Jointly		**Married Filing Separately**		**Single**		**Head of Household**	
Marginal Tax Rate	**Tax Brackets**	**Marginal Tax Rate**	**Tax Brackets**	**Marginal Tax Rate**	**Tax Brackets**	**Marginal Tax Rate**	**Tax Brackets**
14%	$0-$1,000	14%	$0-$500	14%	$0-$500	14%	$0-$1000
15%	$1,000-$2,000	15%	$500-$1000	15%	$500-$1,000	16%	$1,000-$2,000
16%	$2,000-$3,000	16%	$1,000-$1,500	16%	$1,000-$1,500	18%	$2,000-$4,000
17%	$3,000-$4,000	17%	$1,500-$2,000	17%	$1,500-$2,000	19%	$4,000-$6,000

B. *The Marriage Penalty and Marriage Bonus*

Before the 1969 legislation, there were only marriage bonuses in the federal income tax system.[31] The marriage bonus occurs when a person benefits more from getting married, in terms of taxation, than if they had remained single.[32] Thus, looking at the 1955 rate structures, if there were two married couples—one consisting of a single-earner and another consisting of dual-earners—the single-earner couple would receive a marriage bonus because the husband's income would not be stacked with a second income, and the husband would receive the favorable joint rate of taxation rather than single rate, even though he is a single earner. For example, if Couple B—the single-earner—makes $8,000 a year in 1955 he will have a rate of taxation of 22%. If he had remained single, he would have been taxed in the married filing separately category at a rate of 30% for the $8,000 a year. Therefore, by getting married, the spouse in Couple B benefits because he owes less in taxes as a result of being moved to the more favorable married filing jointly bracket. But what about Couple A—the dual-earner couple?

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29 *Id.*

30 *See Federal Individual Income Tax Rates History, Nominal Dollars Income Years 1913-2013*, *supra* note 15.

31 *See* Zelenak, *supra* note 1, at 7.

32 *Id.* at 24.

With the passage of the 1969 legislation, marriage penalties were introduced to federal income taxes.[33] The marriage penalty occurs when two taxpayers who marry have to pay more in federal income taxes than they would have paid if they had remained single.[34] Thus, they are penalized by simply getting married. For example, looking at the 1971 tax rates (which were the first to introduce the new single bracket), if two single people who both make $1,500 annually marry, they will end up with a combined annual income of $3,000 with a 17% rate of taxation. They end up paying more in federal income taxes than if they had remained single because, as single individuals, their individual rate would have been 16% each. This is the marriage penalty.

Every married couple that files a federal income tax return receives either the marriage penalty or bonus, and therefore the single earner couple benefits from getting married while the dual-earner couple is penalized. This inequity between couples who benefit and couples who are penalized, as a result of getting married, is only the beginning of the penalties that dual-earner couples face when they get married.

II. *Couple A and Couple B Under Our Modern Tax Code: The Marriage Penalty/Bonus in Action and Other Inequities*

Let's go back to Couple A and Couple B introduced at the beginning of this comment to illustrate the discrepancy between how single- and dual-earner married couples are treated under our modern tax code. Both couples have an annual taxable income of $120,000 (see Table 4). Couple A is composed of two working spouses while Couple B is composed of only one working spouse. Couple B will receive a marriage bonus because, rather than being taxed at the 36% rate for single individuals, the single earner is instead taxed at the more favorable joint rate of 31%. Couple A, however, will receive the marriage penalty. Imagine if one of the spouses made $40,000 when they were single and the other $80,000 annually. The spouse who made $40,000 would have been taxed 28%, but now is taxed 31% because their income is stacked against the other spouse's higher income. Therefore, the secondary earner's move from the single to the joint rate is a disadvantage rather than a positive because now they will have to pay more taxes than they would have before marriage.

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[33] *Id.* at 69.

[34] *Id.* at 1.

Table 4: 2016 Tax Rate Structure and Brackets [35]							
Married Filing Jointly		**Married Filing Separately**		**Single**		**Head of Household**	
Marginal Tax Rate	**Tax Brackets**	**Marginal Tax Rate**	**Tax Brackets**	**Marginal Tax Rate**	**Tax Brackets**	**Marginal Tax Rate**	**Tax Brackets**
15%	$0-$36,900	15%	$0-$18,450	15%	$0-$22,100	15%	$0-$29,600
28%	$36,901-$89,150	28%	$18,451-$44,575	28%	$22,101-$53,500	28%	$29,601-$76,400
31%	$89,151-$140,000	31%	$44,576-$70,000	31%	$53,501-$115,000	31%	$76,401-$127,500
36%	$140,001-$250,000	36%	$70,001-$125,000	36%	$115,001-$250,000	36%	$127,501-$250,000
39.6%	Over $250,000	39.6%	Over $125,000	39.6%	Over $250,000	39.6%	Over $250,000

This favoring one couple over another is an inequity in the federal income tax system. The reason for this inequity is that the federal income tax system chooses to sacrifice marriage neutrality (no marriage penalties or bonuses)[36] for couple's neutrality (equal tax burdens on equal income couples regardless of the distribution between spouses).[37] Couple B's receiving the marriage bonus over Couple A—who received the marriage penalty—is just the first penalty that Couple A will earn. Once both couples have children, the discrepancy between the two couples will only increase as Couple B (single-earner) will once again benefit over Couple A (dual-earner).

A. *Childcare and the Single-Earner's Benefit of Imputed Income*

Think of all the things that you do for yourself at home: cooking, cleaning, doing laundry, buying groceries, etcetera. Now imagine if you and your spouse worked twelve-hour shifts, five days a week. You would

[35] SELECTED FEDERAL TAXATION STATUTES AND REGULATIONS 14-15 (Daniel J. Lathrope ed., 2017).

[36] *See* Zelenak, *supra* note 1, at 6.

[37] *See* Motro, *supra* note 14, at 1527-28.

probably need help accomplishing all of these things and will most likely have to pay for this help. However, if you stayed at home while your spouse worked, there would be plenty of time to accomplish all of these tasks and no help would be needed. This is an example of imputed income. Imputed income consists of the benefits derived from doing things for yourself and is not considered income for tax purposes.[38]

Looking back at Couple A—two working spouses—and Couple B—one working spouse—who both make $120,000 annually, Couple B will receive the benefit of imputed income because of the domestic spouse. Referencing Table 4, both couples will be taxed at 31% and therefore will pay the same amount of federal income taxes. However, just like with the marriage penalty/bonus discrepancy, Couple B is again more favored for federal income tax purposes than Couple A because of the benefit that Couple B receives in the form of imputed income. Because one of the spouses from Couple B stays at home, they are able to provide goods and services for no cost,[39] while Couple A will have to pay for those same goods and services and be taxed the same as Couple B. This is called a "double marriage bonus."[40] The stay at home spouse's "economic income and its contribution to the couple's standard of living is tax free and marriage to her allows the sole market earner to reduce his taxes with her unused personal exemption, transferred standard deduction and married person's entitlement to the joint return tax rates."[41]

Now imagine if both Couple A and Couple B have children. While having children will be no problem for Couple B who has a stay-at-home spouse to take care of the children, Couple A will face a dilemma. What are two spouses to do when they both work and need someone to watch the kids? They will most likely have to pay for childcare, which is one of the most common forms of imputed income in federal income taxes today.[42] Childcare in today's society is expensive, and in most states costs more than a public college's tuition.[43]

Therefore, is not taxing imputed income really fair to dual-earner couples like our Couple A? While it would be an easy solution to help equalize the tax treatment of the couples to calculate the imputed income that Couple B is receiving and Couple A is not, this however would be inequitable as well. Is it really Couple B's fault that Couple A is composed of two working spouses? No, it is not. Therefore, single-earner couples cannot be punished because their family contains a domestic spouse. Thus,

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[38] *See* Buehler, *supra* note 3, at 196.

[39] Ann F. Thomas, *Marriage and Income Tax Yesterday, Today, and Tomorrow: A Primer and Legislative Scorecard*, 16 N.Y.L. SCH. J. HUM. RTS. 1, 51 (1999).

[40] *Id.*

[41] *Id.*

[42] *See* Buehler, *supra* note 3, at 196.

[43] Child Care Aware of America, *supra* note 8.

there needs to be a better solution to the issue of the double marriage bonus and Couple A's having to endure both the marriage penalty and paying the exorbitant cost of childcare today. Congress has noted the difficulty that working parents face when having to pay for childcare as means to work and has provided remedies within the tax code.

B. *The Tax Code's Solutions to Alleviate the Cost of Childcare on Working Parents*

In 2015, 60.6% of married couples in the United States were composed of two working spouses with children.[44] These couples must pay for childcare whether that care involves all day care for children under school age or after-school care. However, the couple with only one working parent does not have to pay for child care because one parent does not work and can watch the younger children all day or pick the children up after school and care for them.[45] Therefore, the couple with only one working parent is better off than the two-earner couple in the form of imputed income.[46] While the single-earner couple derives the benefit of imputed income and not paying for childcare services, the couple consisting of two working individuals must pay for the childcare and does not have any imputed income. This is an inequity that is addressed in the tax code but is not entirely resolved. The Tax Code provides two solutions for the childcare problem, the Dependent Care Tax Credit ("DCTC") and Dependent Care Assistance Program ("DCAP").

1. The Dependent Care Tax Credit Does Not Adequately Cover the Cost of Childcare in Today's Market

The Dependent Care Tax Credit is available to single parents and families with two working spouses (one working full time and the other working part-time or going to school).[47] The DCTC allows for a maximum credit of $3,000 for one dependent or $6,000 for two or more qualifying dependents.[48] With the credit parents can reduce the amount of taxes they owe by the credit amount.[49] However, the credit amount decreases as the

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44 BUREAU OF LABOR STATISTICS, U.S. DEPT. OF LABOR, EMPLOYMENT CHARACTERISTICS OF FAMILIES—2015 2 (Apr. 22, 2016), https://www.bls.gov/news.release/archives/famee_04222016.pdf.

45 *See* Thomas, supra note 39, at 51.

46 *See id.*

47 Kimberly Lankford, *Claiming the Dependent-Care Tax Credit for 2015*, KIPLINGER (Feb. 16, 2016), https://www.kiplinger.com/article/taxes/T054-C001-S003-claiming-the-dependent-care-tax-credit-for-2015.html.

48 26 U.S.C. §21.

49 *See* Lankford, *supra* note 47.

annual income of the household increases and is capped at 20% for families with an annual gross income of $43,000 or more.[50] Couple A would be eligible for DCTC, but because their income is above the $43,000 they are capped at 20% of the $3,000 or $6,000. Therefore, Couple A would be able to reduce their taxes by $600 if they had one child or $1,200 if they had two. However, at 31% rate of taxation the credit does not adequately lower Couple A's taxation bill.[51] Moreover, does the credit adequately help alleviate the costs of childcare for today's working parent?

According to a 2015 report of child care costs in the United States, childcare in most states cost more than the average college tuition for a public university in that state.[52] The District of Columbia has the highest child care costs in the country with the costs of an infant equaling $22,631 and the cost of an infant and toddler equaling $40,473 a year.[53] DCTC does not come close to offsetting the cost of this care, and for childcare this expensive most families will have to consist of two earning spouses. The District of Columbia is not the only place with insanely high childcare costs. In the report, 22 states had childcare that cost over 12% of their annual income.[54] And even in the states with the lower rates, which means they equal less than 10% of their annual income, the credit is not enough. In Louisiana for instance childcare for two children equals $10,661 a year.[55]

Couple A—with two working spouses—will have to find childcare whether that is at a center or paying someone at home. In the majority of the United States the Dependent Care Tax Credit is not enough to offset the rising cost of childcare.[56] Therefore, this is not an equitable solution to help offset the benefits that Couple B receives over Couple A in the form of imputed income.

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50 *See id.*

51 For Couple A's $120,000 a year income at 31% they would owe $37,200 in federal income taxes.

52 *See* Child Care Aware of America, *supra* note 8, at 33. In 2015, 33 states and the District of Columbia had childcare that costs more than public college tuition. *See* Elise Gould & Tanyell Cooke, *High Quality Child Care Is Out of Reach for Working Families*, ECON. POL. INST. (Oct. 6, 2015), https://www.epi.org/publication/child-care-affordability/.

53 Child Care Aware of America, *What Is the Cost of Child Care In Your State?*, CHILD CARE AWARE OF AMERICA (2015), https://usa.childcareaware.org/CCA_Map/.

54 *Id.*

55 *Id.*

56 *See* 26 U.S.C. § 129; Winn, *supra* note 12.

2. The Dependent Care Assistance Program is Not Offered By All Employers

Under the Dependent Care Assistance Program, employers can allow employees to receive a deduction up to the amount of $5,000 for the expenses accumulated for gainful employment.[57] Therefore, under DCAP some employers allow their employees to deduct their childcare expenses for their work. However, like the Dependent Care Tax Credit, there are limitations to this assistance as well.

First, all employers do not offer the Dependent Care Assistance Program.[58] According to a Bureau of Labor and Statistics Report, in 2014 only 50% of workers had access to some form of DCAP through their employer.[59] However, there are over 30 million families with children that consist of either one or two working spouses.[60] So why don't more employers offer this program?

Second, even for the employers who do offer the program, it is not enough to help alleviate the high cost of childcare. Take Couple A who has two working spouses. They need childcare so that they can both work and luckily one of their employers allows them to take the deduction of $5,000 under DCAP. That means their $120,000 annual income will be decreased by $5,000 and they will have $115,000 annual income to be taxed. Couple A's taxes will be reduced by $1,550. However, this does not even cover the monthly childcare costs in most states.[61]

The Dependent Care Assistance Program, like the Dependent Care Tax Credit, does not adequately cover the cost of childcare in today's society.[62] Furthermore, taxpayers can only choose one or the other for their federal income taxes if they are lucky enough to have an employer who provides DCAP.[63]

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[57] 26 U.S.C. § 129.

[58] Eli R. Stoltzfus, *Access to Dependent Care Reimbursement Accounts and Workplace Funded Childcare*, 4 BEYOND THE NUMBERS 1, BUREAU OF LAB. STAT. (Jan. 2015), http://www.bls.gov/opub/btn/volume-4/pdf/access-to-dependent-care-reimbursement-accounts-and-workplace-funded-childcare.pdf ("In 2014, 39 percent of civilian workers had access to employer-sponsored dependent care reimbursement accounts and 11 percent had access to workplace-funded childcare.").

[59] *Id.*

[60] *Id.*

[61] *See generally* Child Care Aware of America, *supra* note 8.

[62] *See id.*

[63] *See* Buehler, *supra* note 3, at 200.

III. THE HOUSEWIFE REVISITED: HOW THE COST OF CHILDCARE INCENTIVIZES THE BEHAVIOR OF DUAL-EARNER COUPLES

It is a common principle of economics that incentives can alter an individual's behavior.[64] If there are two stores selling the exact same piece of clothing you want but one is selling it for half the market price, you will most likely go to that store and buy the clothing item for cheaper, even if it is at a location you would normally not visit. That is because the store offered you the incentive of 50% off, which regulated your behavior in choosing what store you would visit. Now imagine if you had two children, both you and your spouse worked, and the cost of child care for two children in your state was $40,000 a year (like Washington, D.C.).[65] What would you do?

For high earning individuals there would probably be no problem. You love your job and you choose to keep your job and pay for childcare. However, for most people, the cost of childcare will incentivize their behavior. If the benefits of working are outweighed by the costs of childcare, more couples will decide that one spouse needs to stay home with the children.[66] Looking back at Couple A with the two earner spouses, if spouse two made $40,000 of their annual combined income of $120,000 but had they had to pay $40,000 for child care, that spouse would most likely decide to stay at home. Couple A now has an annual income of $80,000, is still able to file jointly, and they are now able to move down a rate bracket to 28%. They have saved $14,800 in taxes and they no longer have to pay the $40,000 for childcare. They will now become a single-earner family like Couple B and receive the double marriage bonus—receiving the benefit of the marriage bonus and imputed income.

The cost of childcare in the United States will incentivize such decisions, and as the cost of childcare continues to rise and tax credits and deductions stay the same, families will be forced to make this choice. For most married couples, the decision to stay at home will most likely fall on the wife's shoulders, because women are generally the secondary earner whose income is stacked against their husband's higher income.[67] Therefore, most couples will decide to forego the secondary income and instead have a domestic spouse so that they will not have to pay for the high cost of childcare.[68] Accordingly, a regression takes place and the modern family consisting of dual earner spouses becomes the traditional family of when the tax code was first instituted. Thus, the tax code unfairly

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64 *See* Roberto Galbiati, *How Laws Affect Behavior: Obligations, Incentives, and Cooperative Behavior*, 38 INTL. R. L & ECON. 48, 55 (2014).

65 *See* Child Care Aware of America, *supra* note 53.

66 *See* Buehler, *supra* note 3, at 190.

67 Ryznar, *supra* note 7, at 924-25.

68 *Id.*

discriminates against women and is pushing the idea of the traditional family, i.e., working husband, stay-at-home wife and mother, through the penalty that two working individuals receive when they get married ("the marriage penalty"), the nontaxation of imputed income, and by not providing an adequate solution to the high cost of childcare.

A. *The Traditional Family of the Tax Code's Inception*

When the joint marriage bracket was instituted in 1948, the average family consisted of the working husband and stay-at-home mother.[69] Think of the popular television shows such as *I Love Lucy* and *Leave it to Beaver*, which centered on the middle-class family composed of the working husband and full-time stay-at-home mother; this was the traditional family during that time. Women had little choice but to stay at home with the children because it was the norm of the time period.[70] However, as time has evolved, so too has the idea of what is the norm for women in the family unit. From the twenty-one years that occurred between the institution of the joint marriage tax bracket and the introduction of our current tax rates alone, there was a drastic change in the number of mothers who stayed at home.[71] In 1969 when our current tax code was introduced only 49% percent of mothers stayed at home, while the other 51% of mothers worked full-time.[72] Between the time of two major events in our tax code the idea of the traditional family changed and in 1969 more families were composed of dual-earner couples than the single-earner couples of years past, and from 1969 to 1999 the number of working mothers continued to increase over their stay at home counterparts.[73] However, recently there has been a sharp decline in the number of working mothers, while the number of stay at home mothers with working husbands has increased.[74] So why has this drastic change in the number of working mothers decreased? Why is a regression occurring and a return to the traditional idea of family? Could it be that through lower wages, income stacking, and the cost of childcare, women are disincentivized to work and must decide to stay at home?[75]

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69 *See* Pignataro, *supra* note 5, at 247. *See generally* Schulte, *supra* note 5; Cohany, *supra* note 5.

70 *Id.*

71 Jacob Galley, *Stay at Home Mothers through the Years*, BUREAU OF LAB. STAT. (Sept. 2014), http://www.bls.gov/opub/mlr/2014/beyond-bls/stay-at-home-mothers-through-the-years.htm.

72 *Id.*

73 *Id.*

74 The number of stay at home mothers with working mothers has increased to 29%; the modern era low was 23% in 1999. *Id.*

75 *See* Ryznar, *supra* note 7, at 924-25; Pignataro, *supra* note 5, at 247-48.

B. *The Working Families of the Modern Age*

While families could live solely off of one income in 1948 and 1969, the same is not true today with the cost of living so high. Most families in order to survive must have two incomes, and that is why the number of dual-earner couples has increased as time has passed.[76] However, recently there has been a sharp decline in the number of working mothers as more mothers are deciding to stay at home rather than work (see Table A).

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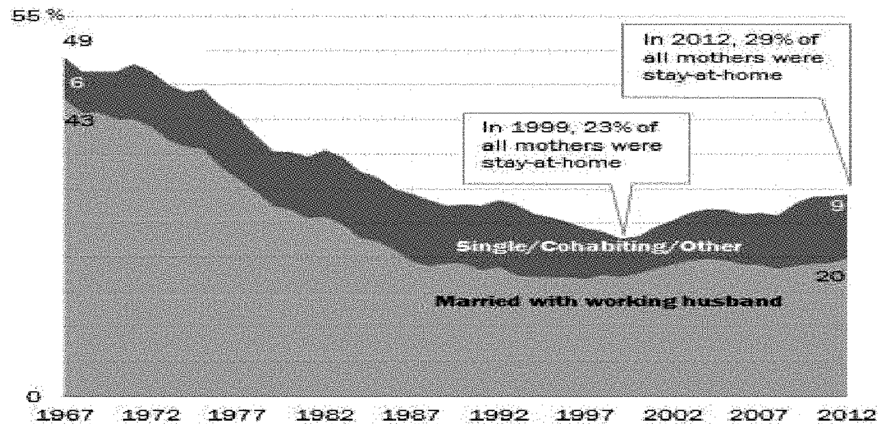
76 *See* BUREAU OF LABOR STATISTICS, *supra* note 44.

TABLE A: The Number of Stay at Home Mothers[77]



So what has caused this regression? Many theorists believe that the cost of childcare is to blame.[78] As one theorist stated, "[e]conomic factors drive childcare decisions, and these decisions are constrained by both family income, and childcare price."[79] Looking at Table B, the average weekly child-care expense has increased to account for more than 7% of a person's weekly income, and this is in the states that have the average cost of childcare. This does not account for the 33 states whose childcare costs more than public college tuition.[80] Therefore, a correlation can be seen between the increase in the number of mothers who are deciding to stay at home (Table A) and the increase in the cost of child care (Table B). If economic choices are what drive our daily decisions, then choosing to stay at home and gain the benefit of imputed income rather than pay for expensive childcare makes sense.

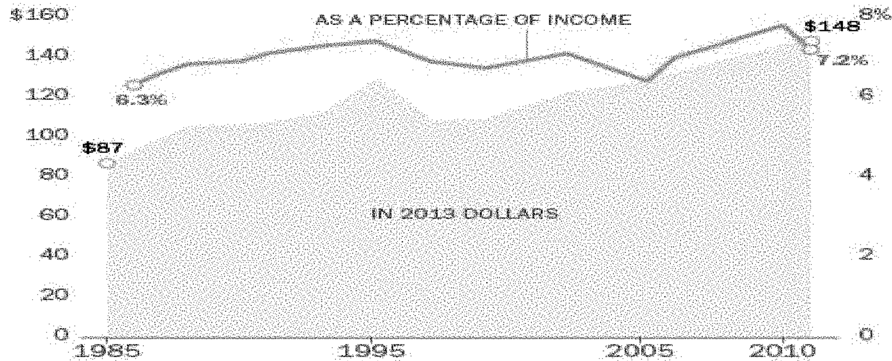
[77] D'Vera Cohn, Gretchen Livingston, & Wendy Wang, *After Decades of Decline, A Rise in Stay-at-Home Mothers*, PEW RESEARCH CENTER (2014), http://www.pewsocialtrends.org/2014/04/08/after-decades-of-decline-a-rise-in-stay-at-home-mothers/.

[78] *See* Meredith Johnson Harbach, *Outsourcing Childcare*, 24 YALE J.L. & FEM. 254, 264 (2012); Drew Desilver, *Rising Cost of Childcare May Help Explain the Recent Increase of Stay-At-Home Mothers*, PEW RESEARCH CENTER (2014), http://www.pewresearch.org/fact-tank/2014/04/08/rising-cost-of-child-care-may-help-explain-increase-in-stay-at-home-moms/; Darlena Cunha, *I'm One of the 56% of Mothers Who 'Prefer' to Stay at Home*, TIME (Oct. 9, 2015), http://time.com/4068559/gallup-poll-stay-at-home-mothers/.

[79] Harbach, *supra* note 78, at 264.

[80] Desilver, *supra* note 78; Gould, *supra* note 52.

TABLE B: Cost of Childcare[81]



The working mother's struggle was depicted recently in a Time article.[82] There the author stated that women were incentivized to stay at home:

> Given the wage gap, the lack of solid family policies, the lack of maternity leave, the discrimination against women in the work force based on family reasons, and the cost of childcare, for many, leaving the home would cost more than staying, in addition to causing huge strain and stress in our daily lives.[83]

The author had been a successful career woman before she married and had children; however, once she had two children the cost of putting them in child care was not worth the income she would make making. She states, "[f]ifteen years ago… we [women] learned that yes, we can venture outside of this societal box of mother and homemaker, but our culture does not invite it, does not make it easy for us, and does not make it worth our very valuable time and effort."[84]

While women have come a long way from the stereotypical housewife of the 1950s, men and women are still not equal. Women are generally the

81 Desilver, *supra* note 78.
82 Cunha, *supra* note 78.
83 *Id.*
84 *Id.*

secondary earners[85], given the wage gap, and because of the tax effects on the secondary earner's income after marriage, it makes sense why more women are deciding to stay at home once they have children. Any gains are offset by the burdens. Let's look back at Couples A and B to see the effects in action. Both couples have the same annual gross income. However, Couple B receives not only a marriage bonus but also the benefit of imputed income in the form of childcare. Couple A, on the other hand, is subject to the marriage penalty, does not receive imputed income, and must pay for childcare. With the rising costs of childcare, Couple A will most likely decide that the benefits of the second income are outweighed by the burden of the marriage penalty and the cost of child care. Instead they will decide that one of the spouses must stay at home, and women are commonly the secondary earner in the family so that burden of staying at home will fall on them.[86] If the mother in Couple A decides to stay at home, Couple A now receives the double marriage bonus like Couple B.

While the tax code has been reformed to resolve issues like the income splitting and the single's penalty, it has not fixed the discrimination that women face by trying to enter the workforce. The tax code has not been reformed to adequately represent contemporary families. By allowing one-earner couples to receive a marriage bonus and two-earner couples to be penalized by the marriage penalty, it is incentivizing certain behavior. The penalties that two-earner couples receive will most likely incentivize them to become one-earner couples so that they receive bonuses rather than penalties. Also, by not allowing greater deductions for childcare, the tax code is also incentivizing more mothers to stay at home. This way they are taxed less, receive a bonus, and have the benefit of imputed income.

The modern tax code was instituted in 1969, where 49 percent of mothers were stay at home.[87] The tax code should reflect today's family. However, a regression is occurring, and women are returning to the role of housewife[88] and more families are beginning to resemble the traditional family of yesteryear. The number of stay at home mothers should not be increasing; instead, the tax code needs to be reformed to include better solutions for couples like Couple A who want to work and have a family as well without being penalized.

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85 *See* Ryznar, *supra* note 7, at 924.

86 *Id.*

87 Galley, *supra* note 71.

88 *See generally* Desilver, *supra* note 78; Cunha, *supra* note 78.

IV. RESOLVING THE INEQUITIES BETWEEN COUPLE A AND COUPLE B: TAX SOLUTIONS FOR MODERN DAY FAMILIES

There are two major inequities that occur between single-earner and dual-earner couples. First, single-earner couples receive the marriage bonus while dual-earner couples receive the marriage penalty. Secondly, single-earner couples receive the benefit of imputed income in the form of childcare and are taxed the same as dual-earner couples. Therefore, single-earner couples receive a double marriage bonus over their dual-earner counterpart.[89] This comment proposes two solutions to resolve the inequities that have occurred between Couple A and Couple B and help alleviate the burden of the marriage penalty and the issue of imputed income.

First, to help alleviate the burden of paying for childcare and having to choose between working or staying at home, child care should be a business deduction. Thus, more women would be incentivized to work rather than stay at home. Second, to equalize the disparity between single- and dual-earner couples receiving either a marriage bonus or penalty, single-earner couples should be moved into the head of household bracket by treating the domestic spouse as a dependent.

A. *Resolving the Issue of Imputed Income Derived from Childcare: Childcare as a Business Deduction*

The first solution that this comment proposes to help alleviate the inequities that occur between single- and dual-earner couples is that childcare should be a business deduction to help offset the imputed income of the single-earner couple. *Smith v. Commissioner*, which held that childcare is not a business deduction, will be analyzed and refuted as outdated precedent, which like the Tax Code, does not represent today's modern society. It will then be proposed that the Tax Code's section concerning business deductions should include childcare as a necessary business expense.

1. Smith v. Commissioner

Smith v. Commissioner was decided in 1939 before anything was added to the Tax Code regarding childcare expenses and it is still the controlling case on whether a business deduction should be allowed for

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[89] *See* Thomas, supra note 39.

childcare expenses.[90] In *Smith* the married couple took a $23.62 deduction on their tax return for the cost of hiring a nursemaid for their children.[91] The couple stated that "but for" the nursemaid, the mother would not have been able to work.[92] The Commissioner disallowed the deduction.[93]

The Tax Court held that childcare was not a valid "but for" argument because anything could be claimed as "but for" this they would be able to work. [94] Such as "but for" the cost of getting out of my sickbed, I could work.[95] The Court stated that:

> It may for practical purposes be said to constitute a distinction between those activities which, as a matter of common acceptance and universal experience, are 'ordinary' or usual as the direct accompaniment of business pursuits, on the one hand; and those which, though they may in some indirect and tenuous degree relate to the circumstances of a profitable occupation, are nevertheless personal in their nature, of a character applicable to human beings generally, and which exist on that plane regardless of the occupation, though not necessarily of the station in life, of the individuals concerned.[96]

For the Tax Court, "the wife's services as custodian of the home and protector of its children are ordinarily rendered without monetary compensation,"[97] therefore, they were personal in nature. The working wife was a new phenomenon in 1939 with most families consisting of the single working father.[98] However, the same cannot be said today, as most families consist of dual-earner couples[99] due to necessity. It has been eighty years since *Smith* was decided and society and families have changed drastically since then. Therefore, this case should no longer control what is an ordinary and necessary business expense.

2. Childcare Is an Ordinary and Necessary Business Expense

In *Smith v. Commissioner*, the Tax Court held that the working wife was a new phenomenon and was not an ordinary expense for business pursuits.[100] This same language was codified within the Tax Code for

90 Smith v. Commissioner, 40 B.T.A. 1038 (1939).
91 *Id.*
92 *Id.*
93 *Id.*
94 *See id.*, at 1038-39.
95 *Id.*
96 *Id.* at 1039-40.
97 *Smith,* 40 B.T.A. at 1039.
98 *Id.*
99 *See* BUREAU OF LABOR STATISTICS, *supra* note 44, at 2.
100 *Smith,* 40 B.T.A. at 1039-40.

business deductions.[101] §162 of the Tax Code states that "there shall be allowed as a deduction all the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business."[102] Deductions covered include travel, rentals, and personal services rendered.[103] There are two elements of the statute: it must first be ordinary and necessary, and secondly, must be incurred for carrying on a trade or business.[104]

In *Smith v. Commissioner,* the Tax Court held that the working wife was not an ordinary phenomenon, but this is no longer true today. In 2013, 69.9% of women were working mothers with children under the age of eighteen.[105] The working mother is an "ordinary" phenomenon in today's society and childcare is "necessary" if both parents work. Most families are like Couple A and they need both spouses' incomes to survive. How can they do this if they do not have someone watch their children? If an expense must be ordinary and necessary, then childcare qualifies as such an expense incurred for carrying on business. Parents cannot work and watch their children at the same time.

What is more, the government has already admitted that childcare is a business expense when it enacted the Dependent Child Assistance Program ("DCAP"). DCAP allows certain employers to give their employees a deduction of up to $5,000 for the expenses accumulated "for gainful employment."[106] The key words in the statute are "for gainful employment," therefore, Congress has realized that childcare is needed for parents to work and has created a solution to the problem with DCAP; however, the deduction is not enough to cover, or even come close to the cost, of childcare in really expensive areas (33 out of 50 states), and furthermore, not all employers offer it to their employees.[107] There needs to be a more equitable solution.

The IRS has already admitted through DCAP that childcare is a work related expense.[108] Allowing childcare to be covered as a business deduction will help couples, like Couple A, who need both spouses to work. The Tax Code's solution to childcare, DCTC and DCAP, is not sufficient to cover the rising costs of childcare. Instead, there needs to be a reasonable market price for childcare based on region and then allow this to be deducted as a business expense. In today's society, most families are like Couple A, with two working spouses; they are already penalized at marriage, the double

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[101] 26 U.S.C. §162.

[102] *Id.*

[103] *Id.*

[104] *Id.*

[105] United States Department of Labor, *Mothers and Families*, UNITED STATES DEPARTMENT OF LABOR, https://www.dol.gov/wb/stats/mother_families.htm (last visited Apr, 22, 2018).

[106] 26 U.S.C. § 129.

[107] *See* Buehler, *supra* note 3, at 198-199; Gould, *supra* note 52; Stoltzfus, *supra* note 58.

[108] 26 U.S.C. § 129.

marriage bonus needs to be eliminated by allowing married couples to deduct their childcare as a business deduction. This way, more women will be incentivized to work rather than stay at home[109] and the regression that has taken place concerning the stay at home mother[110] will stop and our society can continue to progress.

B. *Resolving the Bigger Issue of the Marriage Penalty*

The second issue to be resolved is the disparity between some married couples receiving the marriage bonus and others receiving the marriage penalty. Commentators have argued for decades that there needs to be a solution to the marriage penalty and they have come up with various solutions to the problem.[111] The most popular solution to the problem has been argued to be income splitting.[112] These commentators argue that the tax code needs to go back to the pre-1969 legislation and allow married couples to file single with one-half the couple's earned income.[113] This comment will first refute this solution and then explain how moving single-earner couples into the head of household bracket would be a more equitable solution.

1. Income Splitting is Not an Equitable Solution to the Inequities That Occur Between Single- and Dual-Earner Families

Many critics of the marriage penalty believe that the solution to marriage inequities is income splitting.[114] Instead of joint filing, the couple composed of two working spouses will split their combined income and be taxed as single individuals rather than married couples.[115] This would be a return to the tax code under the 1948 legislation before the joint marriage return was instituted.[116] This would not only solve the marriage penalty but would wipe it out of the tax code completely, because the marriage penalty only comes into effect once two people file together jointly.[117] However, is this the most equitable solution to the problem?

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109 *See* Ryznar, *supra* note 7, at 924-925; Pignataro, *supra* note 5, at 247-248.

110 Galley, *supra* note 71.

111 *See* Pignataro, *supra* note 5, at 248-49; Ryznar, *supra* note 7, at 923; Zelenak, *supra* note 1, at 1-3; Robert S. McIntyre and Michael J. McIntyre, *Fixing the Marriage Penalty Problem*, 33 VAL. U. L. REV. 907, 909 (1999); Thomas, *supra* note 39, at 3-4.

112 Zelenak, *supra* note 1, at 3; McIntyre, *supra* note 113, at 908; Thomas, *supra* note 39, at 83.

113 *Id.*

114 *Id.*

115 *See* Zelenak, *supra* note 1, at 4.

116 McIntyre, *supra* note 104, at 910.

117 *See* Zelenak, *supra* note 1, at 6.

Income splitting married couples now become single individuals in the eyes of the IRS and for federal income tax purposes.[118] But income splitting does not take into account the married couples who have children (which is most married couples).[119] If the couple files separately, then they have a higher tax rate and have to pay more taxes even though they have dependents relying on them. This was the reason that the head of household bracket was created before the single bracket, because of the single individuals who had children but were not married.[120] The head of household was a lower tax rate, which lowered the parents' taxes.[121] Income splitting, however, would not even give the parents a friendlier rate, but would instead give them the second highest rate there is.[122]

Furthermore, with income splitting, single-earner couples will still have an advantage over dual-earner couples because income splitting is the resolution to the marriage penalty, not the discrepancy between the penalty and the bonus. It is an option for those married couples, who are penalized, to file as two singles with one half the income.[123] Therefore, while Couple A will have to file as two singles with the higher rate, Couple B will still be able to file jointly and income split with the favorable rate. This is just another inequitable solution where single-earner couples end up the winner.

2. One-Earner Couple Shifted to Head of Household Bracket

Instead of income splitting, what this comment proposes is that the single-earner families, like Couple B, should be shifted into the head of household bracket. Income splitting does not take into account the fact that married couples have children which is why the joint and head of household brackets are at lower rates of taxation. Moving single-earner families into the head of household bracket and treating the non-working spouse as a dependent for tax purposes will help equalize the treatment between single- and dual-earner couples.

Section 152 of the Tax Code defines dependents for tax purposes.[124] Dependents can be the taxpayer's children, relative, or person living in the taxpayer's home.[125] The section specifically states that a dependent cannot be the taxpayer's spouse,[126] but why not? If the stay at home parent is not

118 *See* Winn, *supra* note 12, at 833.

119 *See* BUREAU OF LABOR STATISTICS, *supra* note 44, at 2.

120 *See* Zelenak, *supra* note 1, at 71-73.

121 *Id.* at 70.

122 *See* Table 4, SELECTED FEDERAL TAXATION STATUTES AND REGULATIONS, *supra* note 35.

123 *See* Zelenak, *supra* note 1, at 4.

124 26 U.S.C. § 152.

125 *Id.*

126 *Id.*

working and the taxpayer's income is the sole source of taxable income in the household then why does this not count? Section 152 of the tax code should be expanded to encompass spouses who stay at home. The taxpayer is providing for their livelihood and they depend on the taxpayer's source of income.

Section 152 allows for many different categories of dependents.[127] The obvious category is children but the section also allows for relatives that the taxpayer cares for and people living at the taxpayer's expense to be deducted as well.[128] In the U.S. Tax Court case *Leonard v. Commissioner*, the taxpayer claimed dependent deductions for her friend and the friend's two minor grandchildren who lived in the home with her.[129] The Court relied on Treasury Regulation § 1.152-1(b), which states that, "in order for an individual to be considered a member of a taxpayer's household, the taxpayer must maintain the household, and both the taxpayer and the individual must occupy the household for the entire taxable year. A taxpayer maintains a household when he or she furnishes more than one-half of the expenses for the household." [130] The Tax Court held that the taxpayer could claim her friend and her grandchildren as dependents on her head of household tax return because she supplied over fifty percent of the household and they were relying on her to care for them.[131]

Likewise in *Morris v. Commissioner*, the Tax Court held that the taxpayer could claim a dependency deduction for his live in unemployed girlfriend.[132] In that case the taxpayer's girlfriend, her daughter, and grandchild lived in the taxpayers' home.[133] The taxpayer was the sole source of income in the home and all depended on that source of income.[134] While the taxpayer could not claim the daughter and grandchild as a dependent, the Tax Court held that the taxpayer could claim his girlfriend as a dependent pursuant to §152(d)(2)(H) of the tax code.[135]

In both *Leonard* and *Morris* the Tax Court relied on whether the taxpayer contributed to more than fifty percent of the income and whether the people they were claiming as dependents relied on that source of income.[136] Therefore why can't a nonworking spouse be claimed as a dependent for tax purposes? It is the working spouse who contributes 100

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[127] Ahlea Ebeling, *When A Housemate Is a Dependent (and a Tax Break)*, FORBES (Feb. 3, 2012), http://www.forbes.com/sites/ashleaebeling/2012/02/03/when-a-housemate-is-a-dependent-and-a-tax-break/#4f96c7cd5049.

[128] *Id.*

[129] Leonard v. Commissioner, T.C. Summ. Op. 2008-141, 1 (2008).

[130] Treas. Reg. § 1.152-1 (as amended in 1971).

[131] *Leonard*, T.C. Summ. Op. 2008-141 at 3.

[132] Morris v. Commissioner, T.C. Summ. Op. 2016-6, 4 (2016).

[133] *Id.*

[134] *Id.*

[135] *Id.*

[136] *Morris*, T.C. Summ. Op. 2016-6 at 4; *Leonard*, T.C. Summ. Op. 2008-141 at 3.

percent of the taxable income in the household and the nonworking spouse relies on that income for their wellbeing. How is it equitable that a friend and girlfriend can be claimed but a spouse—a life partner—cannot be?

It has been justified that the reason that these miscellaneous people can be claimed as dependents is because they do not file a tax return themselves.[137] Thus under a joint return even though the nonworking spouse didn't actually contribute taxable income, they were still technically filing a tax return. However by moving the single-earner couple into the head of household bracket they are in the same position as the dependents in *Leonard* and *Morris*, and therefore should be deductible dependents under §152.

For a demonstration on how this solution would help alleviate the inequity occurring between Couple A and Couple B, let's increase each couple's annual income to demonstrate how shifting the single-earner couple into the head of household bracket is a more equitable solution. Let's say they now both make $130,000 a year. By moving Couple B into the head of household bracket they now pay $6,500 more in taxes than Couple A, who is still in the joint married bracket. It could be argued that by moving the single-earner into the head of household bracket they are now being penalized as well. But by shifting them we are getting rid of one inequity, the marriage bonus, and while they now have to pay more in taxes they still have the benefit of imputed income for childcare. Couple A will still need to pay the $40,000 a year for childcare.[138] So does $6,500 in taxes seem like that much? Imputed income cannot be taxed for federal income tax purposes because it would be unfair but isn't it also unfair that dual income families must have the marriage penalty, not receive imputed income, and pay for childcare while single-earners don't?

C. *A Progressive Tax Code: A Note on the Solutions*

There is no one solution in federal income taxes. The Tax Code is a progressive system and in trying to resolve one inequity others will arise.[139] But allowing dual-earner couples to be penalized repeatedly while single-earner couples receive the marriage bonus is inequitable. Either solution would help equalize the treatment of single- and dual-earner couples. If a business deduction is allowed for childcare then more women would be incentivized to work rather than stay at home, and this would help solve the problem of single-earner couples receiving untaxed imputed income. If

137 *See* Ebeling, *supra* note 129.

138 *See supra* III for the discussion on the cost of childcare.

139 *See* Zelenak, *supra* note 1, *at* 3 ("In a system with progressive marginal rates, *any* tax recognition of marriage will give rise to a plausible complaint by one of the groups that it is being treated unfairly compared to one of the other groups.").

childcare is not deductible then moving single-earner couples into the head of household bracket would help offset some of the gain they receive over dual-earner couples because they would have to pay more in taxes then the dual-earner couple who must still pay for childcare.

CONCLUSION

When two individuals get married they receive either a marriage penalty or marriage bonus. Marriage equality does not exist in the tax code because it is sacrificed for couple's equality.[140] But are married couples really treated equal? Couples will either benefit when they get married or they will be penalized.

When a couple that consists of only a single earner gets married they will receive the marriage bonus because they will be moved to the more favorable married bracket and will therefore be taxed less than if they had stayed single. However, the couple consisting of two earners will be penalized because their incomes will be combined and they will be taxed at a higher income. Dual-earner couples are penalized even further once they have children and have the added expense of childcare to pay for. However, the single-earner couple will receive a double marriage bonus because they have the benefit of the imputed income they receive from not having to pay for childcare because of the domestic spouse. This disparity between couples who are penalized and those who benefit at marriage represents an inequity in the tax code.

What this inequity does is incentivize dual-earner couples to become single-earner couples. Therefore the tax code incentivizes certain types of families, the traditional family of the working husband and domestic wife from when the tax code was first instituted. Because women are generally the secondary earner and their salary is stacked against their husband's higher income (due to the wage gap) women are disincentivized from working because as the cost of childcare increases, the benefit of working is outweighed by the cost of the care. Therefore the stereotypical vision of the housewife of the fifties is revisited because once women decide to stay at home and care for their children they are rewarded by receiving the marriage bonus and the benefit of imputed income.

The tax code has been revised many times over the years to solve inequities in society, like the issues of income splitting and the single's penalty. However the tax code has not been revised to adequately represent today's modern family. A regression is occurring in the number of women who are entering the workforce and these women are choosing to stay at home because of the cost of childcare and because single-earner couples benefit from the marriage bonus. While the tax code has enacted solutions

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[140] *See* Motro, *supra* note 14, at 1527-28.

to help alleviate parent's burden in paying for childcare these solutions do not entirely resolve the problem and the marriage bonus is still an issue.

However, by allowing childcare to become a business deduction, dual-earner families do not have to choose between work and family, and more women can decide to work rather than stay at home. Also by pushing the single-earner couple into the head of household bracket the inequity of the marriage bonus/penalty discrepancy is resolved and single- and dual-earner couples are put on more even footing for tax purposes. By moving the single-earner family they are still taxed at a favorable rate but not as favorable as the married bracket to help offset the benefits they receive from the untaxed imputed income.

There are many inequities in the tax code and there are many solutions to the problems. However, in regards to the inequities that occur after marriage, a childcare deduction or rate structure shifting would be a step in the right direction towards a more progressive tax system. More families are composed of dual-earners. Therefore, they should be supported rather than disincentivized from working.

THE DOJ: THE JUDGE AND THE JURY? AN ANALYSIS OF WHO WIELDS THE POWER IN THE CRIMINAL JUSTICE SYSTEM AFTER ATTORNEY GENERAL SESSIONS' CRIMINAL CHARGING AND SENTENCING POLICIES

Emily Yu

I. INTRODUCTION

In a May 2017 memo, then-Attorney General Jeff Sessions announced a drastic departure in criminal charging and sentencing policies from former Attorney General Holder's policies.[1] Key amongst these policy changes were instructions to federal prosecutors that they: (1) charge and pursue the most serious, readily provable offenses, with carefully considered exceptions, (2) disclose all facts that impact sentencing guidelines, and (3) recommend a sentence within the advisory guideline range, with departures requiring supervisory approval.[2]

Many have written theoretically about the pros and cons of the sentencing guidelines, mandatory minimums, and prosecutorial practices, but few have applied their general analyses of criminal charging and sentencing policies to pronounced guidance from the Department of Justice ("DOJ"). And none have yet assessed the impact of returning to an approach like Sessions' after years of a "softer on crime" policy such as Holder's. What this comment contributes is a unique and first of its kind perspective on the return to hardline policies after decades of loosening charging and sentencing policies. This comment will analyze the effects of the changes implemented by the Sessions policies on the variety of actors impacted, from those within the DOJ, such as United States Attorney's Offices ("USAOs"), to criminal defendants, focusing on low-level drug offenders.

Part II will compare Sessions' and Holder's policies, summarize the state of the federal prison system at the end of the Holder-era, and provide a brief survey of the array of responses from different actors in the criminal justice system. Part III will analyze how this policy will change the operations of federal prosecutors' offices and their abilities to impact sentencing. Part III will also elaborate on who truly has the power to affect federal sentencing, what problems exist in this allocation of power, and

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[1] THE ATT'Y GEN., U.S. DEP'T OF JUST., MEMORANDUM FOR ALL FEDERAL PROSECUTORS ON DEPARTMENT CHARGING AND SENTENCING POLICY (May 10, 2017) [hereinafter 2017 MEMORANDUM].

[2] *Id.*

what—if anything—can be done to make sentencing more fair for offenders across the country. Part IV will conclude what changes Sessions' policy likely brought about, how large an impact these changes have had, and how reformers can work to continue to improve our criminal justice system.

II. BACKGROUND

Comparing Sessions' policies to Holder's is critical to understanding the effect that the new policies would have on prosecutors' offices and the federal prison system. A review of the effects the Holder policies have had will provide a basis for analyzing the changes that Sessions' policies will bring. Most of the following discussion will concern charging and sentencing policies as related to low-level drug offenders, as drug offenders will be the most impacted by the policy change.[3] It is important to note that the effects of the policy changes may affect other kinds of offenders differently.

A. *Sessions vs. Holder: Comparing Attorneys General's Policies*

The Sessions memo rescinded certain key provisions of Holder's policies.[4] Some of the most notable policies overturned include: (1) requiring federal prosecutors to decline charging offenders with quantities necessary to trigger mandatory minimum sentences if defendants are non-violent, do not have a significant criminal history, do not operate in supervisory roles, and are not involved with criminal organizations; (2) allowing federal prosecutors to consider recommending below-guidelines sentences if the guideline range meets or exceeds the mandatory minimum; and (3) requiring federal prosecutors to disclose to courts the full extent of defendants' culpability, even if charging documents lack the specificity.[5]

The current statutory criteria triggering mandatory minimum penalties include manufacturing, trafficking, importing, or distributing a certain quantity of a specific type of drug, employing a person under 18 in the aforementioned criminal acts, selling to a person under 21, selling within 1,000 feet of a school, possessing or using a firearm in connection with the

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[3] Laura Jarrett & Eugene Scott, *AG Sessions Paves Way for Stricter Sentencing in Criminal Cases*, CNN (May 12, 2017), https://www.cnn.com/2017/05/12/politics/sessions-criminal-charging-memo/index.html.

[4] *Id.*

[5] THE ATT'Y GEN., U.S. DEP'T OF JUST., MEMORANDUM TO THE UNITED STATES ATTORNEYS AND ASSISTANT ATTORNEY GENERAL FOR THE CRIMINAL DIVISION ON DEPARTMENT POLICY ON CHARGING MANDATORY MINIMUM SENTENCES AND RECIDIVIST ENHANCEMENTS IN CERTAIN DRUG CASES (August 12, 2013) [hereinafter 2013 MEMORANDUM].

offense, identity theft in connection with the offense, and prior convictions.[6] The sentencing guidelines have a catchall provision that ensures that the bottom of the guideline range does not fall beneath the mandatory minimums.[7] Lastly, culpability is not mentioned in the United States Attorney's manual in any sections regarding sentencing.[8]

B. *Crime and Prison Time in the Obama-Era*

In 2016, there was a one-year uptick in national crime rates after almost two decades of decline,[9] with the national murder rate rising an estimated 7.8%.[10] The current federal prison population stands at 155,197, which is down from 190,000 inmates in 2017.[11] Likewise over the course of Obama's presidency, the number of sentenced prisoners in federal custody fell by over 5%.[12] The decrease can be attributed in part to Holder's policies, but also to the passage of the Fair Sentencing Act and the U.S. Sentencing Commission's ("Sentencing Commission") recommendations, both of which amended sentence lengths for crack cocaine offenses.[13] Holder's policies are also attributed with focusing prosecution on the most dangerous offenders, but, although fewer offenders were convicted of offenses carrying minimum penalties, the rate of non-mandatory offenders did not change.[14]

Sessions' reversal of former Deputy Attorney General Sally Yates' directive to the DOJ to stop using private prisons to house federal inmates may be an indication that he is preparing for an increase in the prison population.[15] Even the Sentencing Commission has acknowledged that the

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6 U.S. SENT'G COMM'N, *An Overview of Mandatory Minimum Penalties in the Federal Criminal Justice System* 11 (Jul. 2017) [hereinafter *Overview*].

7 *Id.* at 17.

8 OFF. OF THE U.S. ATT'Y, U.S. DEP'T OF JUST., U.S. ATTORNEYS' MANUAL (1997) [hereinafter U.S. ATTORNEYS' MANUAL].

9 Matt Ford, *Jeff Sessions Reinvigorates the Drug War*, THE ATLANTIC (May 12, 2017), https://www.theatlantic.com/politics/archive/2017/05/sessions-sentencing-memo/526029/.

10 *Id.*

11 *Compare* FED. BUREAU OF PRISONS, *Statistics*, https://www.bop.gov/about/statistics/population_statistics.jsp (last updated Oct. 8, 2020) *with* Kevin Johnson, *Attorney General Jeff Sessions Enacts Harsher Charging, Sentencing Policy*, USA TODAY (May 12, 2017), https://www.usatoday.com/story/news/politics/2017/05/12/attorney-general-jeff-sessions-enacts-harsher-charging-sentencing-policy/101571324/.

12 Johnson, *supra* note 11.

13 *Overview*, *supra* note 6, at 49.

14 *Id.* at 50.

15 Sari Horwitz & Matt Zapotosky, *Sessions Issues Sweeping New Criminal Charging Policy*, WASH. POST (May 12, 2017), https://www.washingtonpost.com/world/national-security/sessions-issues-sweeping-new-criminal-charging-policy/2017/05/11/4752bd42-3697-11e7-b373-418f6849a004_story.html?utm_term=.891f0eea5c4f.

trends in sentencing it has reported on may be affected by the enactment of Sessions' policies.[16]

C. *Critiques from the Political Left and Right*

The political left has likened Sessions' policies to a return to the War on Drugs of the 1980s and 90s.[17] Critics of Sessions' policies argue that the resulting sentences would be too harsh and cause an undue increase in prison populations;[18] inter-city sentencing disparities, almost entirely for drug offenses, support the notion that the sentencing guidelines allow some to manipulate the system.[19] Holder has criticized his successor's policies, and has stated that the approach, which seems to be borrowed from the Reagan-era, had been proven to do little to improve public safety and will financially ruin the DOJ by bringing it back to spending one-third of its budget on costs associated with incarceration.[20] Sessions even had critics from the political right who argue that there are less costly and more effective means than incarceration to deal with low-level offenders, especially those who are not a public safety threat.[21]

The president of the National Association of Assistant United States Attorneys has praised the new policy for "restor[ing] the tools Congress intended assistant U.S. attorneys to have at their disposal to prosecute drug traffickers and dismantle drug trafficking enterprises."[22] Sessions has remarked that his policy change is not targeted towards low-level drug users, but rather at drug dealers and traffickers.[23]

III. ANALYSIS

Contrary to Sessions' critics' beliefs, Sessions' two key policy changes were not that great a departure from business as usual at the DOJ. An analysis of current federal prosecutors' guidelines rebuts the assumption that the charging policy Sessions advanced endowed Assistant United States Attorneys ("AUSAs") with any more power than they already hold.

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16 *Overview*, *supra* note 6, at 24–25.

17 Horwitz & Zapotosky, *supra* note 15.

18 *Id.*

19 Frank O. Bowman, III & Michael Heise, *Quiet Rebellion? Explaining Nearly a Decade of Declining Federal Drug Sentences*, 86 IOWA L. REV. 1043, 1134 (2001).

20 Johnson, *supra* note 11.

21 Horwitz & Zapotosky, *supra* note 15.

22 *Id.*

23 Colin Dwyer, *Sessions Tells Prosecutors to Seek 'Most Serious' Chargers, Stricter Sentences*, NPR (May 12, 2017), http://www.npr.org/sections/thetwo-way/2017/05/12/528086525/sessions-tells-prosecutors-to-seek-most-serious-charges-stricter-sentences.

Analyzing federal prosecutors' and the DOJ's influence on sentencing before and after the policies yields a similar conclusion- that there was little authority in their hands before and about as little authority now.

This analysis then focuses on the impact of the charging and sentencing policies on low-level drug offenders, the largest population facing the most serious consequences from the departure from Holder's policies to Sessions' policies. Lastly, the impacts of charging and sentencing policies on drug offenders are broken down regionally, revealing a more uncertain nature of the future impacts of the policies. After discussion of who truly wields the power at the end of the process during sentencing, the analysis then turns to how those with the greatest potential to affect change can enact policies to fix the problems identified.

A. *Charging the Most Serious Offenses is the Least Serious Change to Current Federal Prosecution Protocol*

Attorney General Sessions' charging policy was not as great a departure from current protocol for federal prosecutors as some of his critics make it out to be. The United States Attorney's Handbook ("handbook"), last updated in January 2017, before the new policy was announced, already included similar directions. The relevant portions are excerpted below:

> 9-27.300 - Selecting Charges—Charging Most Serious Offenses
>
> A. …The attorney for the government should select charges based on an individualized assessment of the extent to which particular charges fit the specific facts and circumstances of the case, are consistent with the purposes of the federal criminal code, and maximize the impact of federal resources on crime. After this assessment, the attorney for the government will generally conclude that he or she should charge, or should recommend that the grand jury charge, the most serious offense that is consistent with the nature of the defendant's conduct, and that will probably be sufficient to sustain a conviction.
>
> …B. At the outset, the attorney for the government should bear in mind that he/she will have to introduce at trial admissible evidence sufficient to obtain and sustain a conviction, or else the government will suffer a dismissal, or a reversal on appeal. For this reason, he/she should not include in an information, or recommend in an indictment, charges that he/she cannot reasonably expect to prove beyond a reasonable doubt by legally sufficient and admissible evidence at trial.
>
> …USAM 9-27.300 also expresses the principle that prosecutors conduct an individualized assessment of the extent to which particular charges fit the specific circumstance of the case are consistent with the purpose of the federal criminal code, and maximize the impact of federal resources on crime. While this means that prosecutors will generally charge the most serious offense that is consistent with the nature of the defendant's conduct, and that is likely to result in a

> sustainable conviction, the charges always should reflect an individualized assessment and fairly reflect the defendant's criminal conduct. ...The general presumption that a defendant will be charged with the most serious offense that is encompassed by his/her conduct provides the framework for ensuring equal justice in the prosecution of federal criminal offenders.[24]

The Sessions' policy did not mention AUSAs making individualized assessments, but it comes to the same conclusion as is included in the handbook: that, in most cases, the AUSA should charge the most serious offense. In fact, the wording used in the Sessions' memo not only mirrors the wording in the handbook, but it also mirrors the wording in Attorneys General's memos before him, with Holder's being the exception, not the norm.[25]

The handbook cautions AUSAs to consider the burden of proof and admissible evidence when deciding on the most serious charges to bring.[26] The comments in the handbook also remind AUSAs to keep DOJ resources in mind when and if they choose to pursue the most serious charges.[27]

The fact that the standard operating procedure for AUSAs has many safeguards to the "most serious charges" policy could mean that the policy will not have as significant an effect on prosecutorial tactics as critics have suggested. Sessions' memo did not contradict anything in the handbook, so AUSAs should expect to continue considering these constraints when applying the "most serious charges" policy.

Sessions' policy essentially added little to nothing to the protocols that are already on the books for AUSAs. Whether they had been following those protocols prior to Sessions' policy is a different question. But one thing is certain: operations under Sessions' policy align much more closely to the ideals set forth in the handbook than operations under Holder's policies did. Consider an example of the difference between how the handbook had governed prosecutorial decision-making in Holder's DOJ versus how it may govern in Sessions':

> Let's say a prosecutor is presented with solid evidence that a defendant sold seven kilograms of cocaine. The crime is readily provable. Nevertheless, the prosecutor follows the Obama deviation from traditional Justice Department policy, charging a much less serious offense: a distribution that does not specify an amount of cocaine — as if we were talking about a one-vial street sale. The purpose of this

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24 U.S. ATTORNEYS' MANUAL, *supra* note 8.

25 Kate Stith, *The Arc of the Pendulum: Judges, Prosecutors, and the Exercise of Discretion*, 117 YALE L. J. 1420, 1424 (2008).

26 U.S. ATTORNEYS' MANUAL, *supra* note 8.

27 U.S. ATTORNEYS' MANUAL, *supra* note 8.

> sleight of hand is to evade the controlling statute's ten-year sentence, inviting the judge to impose little or no jail time.[28]

In the hypothetical, the Holder policy allowed prosecutors to disregard the ten-year minimum sentence for distribution of five or more kilograms of cocaine.[29] If prosecutors had not been allowed to pick and choose charges under Holder's policies, adherence to the mandatory minimum would have changed both the approach and the outcome of a case like this one.[30]

A previous analysis highlighted problems with how USAOs were working to get around mandatory minimums.[31] Prosecutors use substantial assistance motions to alleviate and avoid mandatory sentences completely by charging certain counts that have no mandatory sentence.[32] The analysis warned, "If sentences are now being determined based on what an individual prosecutor thinks the case is worth, this will return us to unwarranted disparity."[33]

Not only did Holder's policies allow prosecutors to disregard mandatory minimums, which are set by Congress, but Holder's policies also instructed prosecutors not to list quantities of drugs seized unless a defendant was an organizer within a criminal enterprise, was violent, or had a long criminal history.[34] The Sessions policy revived respect for the principles of USAOs, and, more broadly, preserves the separation of powers by giving Congressional mandates the full force of their intended effect.[35] In essence, the Sessions policy, while it did not say anything new compared to what was already in the handbook, emphasized a return to the original meanings of the policies and procedures therein.

The Sessions policy can be viewed as a net positive through the lens of adherence to handbook principles. At worst, the policy can be viewed as not having affected any change at all because of its lack of meaningfully divergent wording. Under either interpretation, critics have greatly overblown the negative impact of the new charging policies. One scholar said it best when describing the efficacy of policies like Sessions':

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[28] Andrew C. McCarthy, *On Criminal Justice, Sessions is Returning DOJ to the Rule of Law*, NAT'L REVIEW (Sept. 16, 2017), http://www.nationalreview.com/article/451436/criminal-justice-reform-jeff-sessions-returns-doj-rule-law.

[29] *Id.*

[30] *See id.*

[31] Joe B. Brown, *Quo Vadis? What Congress and DOJ Should Do in Response to the Justice Department's "Analysis of Non-Violent Drug Offenders with Minimal Criminal Histories,"* 7 FED. SENT'G REP. 25, 26–27 (1994).

[32] *Id.* at 27.

[33] *Id.*

[34] Ford, *supra* note 10.

[35] McCarthy, *supra* note 28.

> The immediate effectiveness of these statements of policy, no matter how mandatory on their face and how few the expressly authorized exceptions, depended on the incentives and attitudes of the U.S. Attorneys and their line prosecutors. No enforcement mechanism having been provided, and language being what it is – for example, what is "readily provable?" – there was operational and interpretive space in implementing these mandates. In any event…there were not enough people in Main Justice to monitor and enforce "mandatory" charging policies in every U.S. Attorney's office. The mandatory-policy approach to controlling dispersed prosecutorial discretion can work (if it can work at all) only by altering the practice and norms of U.S. Attorney's offices over time.[36]

Lastly, the reality is that each of the 94 USAOs have their own internal operating procedures and relationships with local defense attorneys and federal judges,[37] and any guidance from the top in the form of an Attorney General's memo is only going to have so much of an impact on established USAO day-to-day activities.

B. *Directing Prosecutors to Adhere More Closely to Sentencing Guidelines Will Have Negligible Effects on Sentencing Decisions*

Once upon a time, the DOJ and federal prosecutors wielded the bulk of sentencing authority under the mandatory sentencing guidelines.[38] This power translated to federal prosecutors being able to threaten the harshest sentences in the guidelines.[39] Then, along came the *United States v. Booker* decision.[40] The decision rendered the guidelines advisory, instead of mandatory, and thus transferred the greatest influence over sentencing to judges.[41]

The effect of this shifting of influence meant that federal prosecutors no longer had harsh, mandatory guidelines-range sentences in their back pockets that they could pull out in plea bargain negotiations with defendants.[42] *Booker* also diluted the impact of the DOJ's efforts to standardize procedures because it now had such a greatly reduced stake in the sentencing process.[43] Essentially, influence over sentencing transformed into a localized, judge-by-judge process rather than a national, top-down process dictated by the DOJ to federal prosecutors.[44]

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[36] Stith, *supra* note 25, at 1470.

[37] HUMAN RIGHTS WATCH, *An Offer You Can't Refuse: How US Federal Prosecutors Force Drug Defendants to Plead Guilty* (Dec. 5, 2013), https://www.hrw.org/report/2013/12/05/offer-you-cant-refuse/how-us-federal-prosecutors-force-drug-defendants-plead.

[38] Stith, *supra* note 25, at 1424.

[39] *Id.* at 1425.

[40] *Id.* at 1426.

[41] *Id.* at 1426–27.

[42] *Id.* at 1427.

[43] *Id.*

[44] Stith, *supra* note 25, at 1427.

The *Booker* decision opened the floodgates for variable sentencing subject to judicial discretion.[45] However, federal prosecutors' powers in the sentencing process were not nearly as stripped as the DOJ's, as the new localized model of sentencing still afforded prosecutors some discretion and influence.[46] That being said, federal prosecutors' stricter adherence to guidelines requirements, which the Sessions memo called for, may still have some positive effects in terms of increasing the predictability of sentences.

One study has found that this approach has measurably reduced inter-judge disparity within judicial districts.[47] Another study has suggested that instilling principles of adhering more strictly to guidelines, in general, pave the way for working groups in the courtroom to exercise discretion in charging, which leads to encouraging guilty pleas, ultimately maximizing organizational efficiency.[48] This is demonstrated by the fact that the average sentence for a federal drug offender who pled guilty was five years and four months, compared to the average sentence for a defendant who went to trial- 16 years, almost three times higher.[49] This finding stands in stark contrast to the conclusion that Sessions' critics have come to: that prosecutors' stricter adherence to the sentencing guidelines will undermine the efficiency of courtrooms, federal prosecutors' offices, and, further down the pipeline, prisons.

Yet another study has suggested that prosecutors have responded to the loss of sentencing authority by filing more enhancements.[50] The study bases its claim on a 2015 white paper from the National Association of AUSAs that attacked sentencing reform efforts.[51] The Sessions policy itself was silent on enhancements, but enhancements is one aspect of the sentencing guidelines left untouched after *Booker*.

The *Booker* analysis concluded that the DOJ should seriously reconsider its efforts to control prosecutors, because doing so now "puts the prosecutor in the position not of upholding the law, but of opposing in all circumstances the exercise of lawful discretionary decisions of the sentencing judge."[52] It was advised that federal prosecutors consider their own credibility with judges when they object to perfectly sound below-guideline sentences, objections that the Sessions policy would mandate they

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45 *Id.* at 1481.

46 *Id.* at 1427.

47 Bowman, III & Heise, *supra* note 19, at 1135.

48 Rodney L. Engen & Sara Steen, *The Power to Punish: Discretion and Sentencing Reform in the War on Drugs*, 105 AM. J. OF SOC. 1357, 1387 (2000).

49 HUMAN RIGHTS WATCH, *supra* note 37.

50 MONA LYNCH, HARD BARGAINS: THE COERCIVE POWER OF DRUG LAWS IN FEDERAL COURT 136 (2016).

51 *Id.*

52 Stith, *supra* note 25, at 1484.

make.[53] Upholding the professional repute of federal prosecutors should be of the utmost interest to the DOJ, and the department may want to rethink its policy if it turns out down the road that too strict of adherence to sentencing policies hurts the credibility of prosecutors in the courtroom. However, this is an incredibly difficult harm to quantify, and the DOJ may never gather the relevant statistics to make such a determination.

For all the uncertainties and potential hazards that had come with Sessions' policy, there are far greater articulable gains such as an increase in efficiency of courtroom working groups. Under this policy, the best-case scenario is that it maximizes efficiency in the plea bargaining and sentencing processes. The most likely scenario is that nothing happens at all; federal prosecutors have so greatly diminished a role in the sentencing process that any direction from the DOJ, which is even further removed from sentencing, may not affect any change to sentence lengths because it is federal judges that now hold all the power in sentencing after *Booker*.

One final note on *Booker* and its effect on the sentencing guidelines. While the decision made the guidelines advisory, the Sentencing Commission continues to make recommendations to changes to the guidelines, which are adopted absent Congressional action.[54] As part of the Sentencing Commission's annual review process, it monitors federal prosecutors' charging and plea agreement practices.[55] It can be reasonably concluded that if prosecutors' charging and sentencing practices are drastically affected by the Sessions policy that the Sentencing Commission would be able to recognize any subsequent changes to sentencing and respond accordingly in the form of guideline amendment recommendations.

C. *Prosecutorial Discretion in Charging and Sentencing Drug Offenses*

While the last two subsections argue that not much will change with criminal charging and sentencing because federal prosecutors have little leeway or influence in either, the reality is that they are not entirely powerless. One analysis noted that, "If all federal prosecutors had abided by the pronouncements from Main Justice, the result would have been a rigidity in law enforcement wholly incompatible with the flexible and variable substantive criminal law that Congress has enacted."[56] Even with the limits placed on both prosecutorial discretion under the Sessions policy and the already limited scope of federal prosecutors' influence in sentencing, federal prosecutors have done whatever is within their powers

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53 Stith, *supra* note 25, at 1484.

54 U.S. SENTENCING COMM'N, *Guidelines Manual* 14 (Nov. 1, 2016) [hereinafter *Guidelines Manual*].

55 *Id.* at 7.

56 Stith, *supra* note 25, at 1443.

to affect sentencing, especially in reducing sentence lengths for low-level drug offenders.[57]

Sentencing guidelines are not necessarily tying the hands of federal prosecutors and they can do more than the seemingly rigid guidelines allow.[58] One study showed that prosecutors and judges both exercise discretionary authority to reduce drug sentences at every possible point in the sentencing process and that the trend has been towards leniency.[59]

There are many discretionary factors affecting sentence length but, most notably, the rate at which prosecutors recommend that judges award substantial assistance departures in drug cases is nearly triple the rate for all other cases, supporting an inference that departures were being used as case management or sentence manipulation tools.[60] Taking both discretionary and non-discretionary factors affecting federal drug sentencing into account, the study concluded that prosecutors were choosing to recommend shorter sentences.[61] This lends support to the notion that judges and prosecutors have come to a collective judgment that sentences are too high.[62] This demonstrates the point made in an earlier subsection, which suggested that, under the localized control mode, federal prosecutors still retain influence. This is especially true when prosecutors work alongside, share the same views as, or otherwise concur with judges' opinions.

It has also been suggested that increased federal prosecutor caseloads bode well for drug offenders.[63] Statistical analyses showed that AUSAs' criminal caseloads were statistically significant in affecting sentence length, and increased AUSA caseloads correlated with decreased average drug sentences.[64] Additionally, an increase in the proportion of marijuana cases in a district correlated with an average decline in drug sentences overall.[65] This all goes to show that what little influence federal prosecutors retained in the sentencing process under *Booker* have been used in favor of more lenient charges and penalties for drug offenders.

While DOJ leadership may give strongly-worded "law and order" speeches in public and in department-wide memos, line prosecutors are not supervised to so great an extent as to be stripped of their own value judgments when it comes to bringing charges and weighing in at sentencing. It could also be that the increasing workloads of AUSAs have forced them to prioritize offenses, contrary to the common critiques of the effects of Sessions' policies. Whether intentionally or inadvertently, a

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57 Bowman, III & Heise, *supra* note 19, at 481.

58 *Id.* at 480; Stith, *supra* note 25, at 1420.

59 Bowman, III & Heise, *supra* note 19, at 481.

60 *Id.* at 529.

61 *Id.*

62 *Id.* at 558.

63 *Id.* at 544.

64 *Id.*

65 Bowman, III & Heise, *supra* note 19, at 544.

policy like Sessions' is likely to result in fewer charges and less severe sentences against drug offenders, however counter-intuitive that may seem.

D. *The Great Divide – Variable Charging and Sentencing for Drug Offenses Across the U.S.*

When researchers took a more individualized look at the federal court districts and circuits, they found that, in the 94 districts, average drug sentences had declined in 51 districts and increased in 41 districts in recent years.[66] Furthermore, the variation between districts in average drug sentences was stark- the average drug sentence was a low of 22.4 months in the Southern District of California and a high of 176 months in the Eastern District of North Carolina.[67] The analyses also showed other differences in drug sentence trends in pockets across America: border districts had shorter average drug sentences than non-border districts, population dense districts had lower average drug sentence lengths than more sparsely populated districts, and greater numbers of judges and prosecutors in a district were correlated with reduced average sentence lengths.[68]

The population density statistics are significant when discussing Sessions' policies because critics assume that his policies would lead to disproportionately higher sentences for offenders in inner cities. As articulated in one study advancing the urban prison over-population theory, "[L]aws intended to increase severity of sentencing would tend to impact urban jurisdictions more heavily, which might in turn lead to increased workloads on already overburdened urban courts."[69] One explanation as to the difference between the conclusions drawn by Sessions' naysayers and the aforementioned statistic could be that the criticism is not grounded specifically in analyzing drug offenses.

All this goes to show that the general conclusions drawn in earlier subsections may not apply to all districts, regions, or cities because of the differences shown by these variable drug offense incarceration rates. The reality of how this policy plays out is anybody's guess, but one criminology professor's best guess is that:

> Some [localities that have operated under this less punitive criminal justice ethos] are just not going to bring as many drug cases...That doesn't mean the crimes will go unpunished – the cases will likely end up in state court and they'll be managed locally.... In the Northeast,

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66 *Id.* at 531.

67 *Id.* at 531–32.

68 *Id.* at 553–54.

69 Harold D. Miller, *Projecting the Impact of New Sentencing Laws on Prison Populations*, 13 POL'Y SCI'S. 51, 61 (1981).

> you'll probably see mainly very serious drug cases being brought.... In the South, in particular, they might be "unleashed."[70]

E. *Judges' Discretion in Sentencing*

A review of cases from multiple circuits shows that, across the board, judges are given broad discretion in sentencing. The appellate courts have allowed district court judges to stand in for prosecutors and juries, doggedly pursue their own opinions in sentencing despite having convictions reversed and remanded, and even requiring that defendants prove their own innocence. The discretion that appellate courts have allowed district court judges should scare offenders, defense counsel, and criminal justice advocates alike more than any charging or sentencing directive given by the DOJ to its line prosecutors.

In *United States v. Pollard*, the Eighth Circuit held that the district court, rather than the jury, making the drug quantity finding was not a violation of the defendant's rights.[71] The drug quantity was not specified in the indictment, the jury instructions, or the verdict form.[72] The Eighth Circuit concluded that sentences that do not reference drug quantity are permissible even when the quantity was absent in the indictment or juries' findings.[73]

In *United States v. Mancari*, a defendant who was convicted of conspiracy to distribute cocaine and three counts of distribution was sentenced to a four year term on his conspiracy count, but after his conspiracy conviction was reversed by the Seventh Circuit, was sentenced to the same term for his distribution counts.[74] The Seventh Circuit held, that upon its previous review of this case, when the case was remanded to the district court it was allowed to resentence to "effectuate the original sentencing intent."[75] The Seventh Circuit affirmed the district court's sentence on the distribution counts.[76]

In *United States v. Haines*, the Fifth Circuit considered whether the district court's sentences for three defendants were appropriate.[77] The Fifth Circuit vacated two defendants' sentences because the district court had impermissibly considered the relevant quantity as applicable to the entire conspiracy and not to each of the defendants individually, and because the

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70 Leon Neyfakh, *The DOJ's Drug Warrior*, SLATE (May 15, 2017), https://slate.com/news-and-politics/2017/05/jeff-sessions-hard-line-drug-policies-explained.html.

71 United States v. Pollard, 249 F.3d 738 (8th Cir. 2001).

72 *Id.* at 739.

73 *Id.*

74 United States v. Mancari, 914 F.2d 1014, 1017–18 (7th Cir. 1990).

75 *Id.* at 1021–22.

76 *Id.* at 1022.

77 United States v. Haines, 803 F.3d 713 (5th Cir. 2015).

jury had not made any findings as to drug quantity.[78] The Fifth Circuit found that another defendant's sentence was not erroneous when the district court made factual findings that one of the main purposes of maintaining his apartment was for drug distribution.[79]

In *United States v. Parnell*, the Third Circuit held that the district court did not clearly err in attributing the entire quantity of drugs to the defendant in sentencing.[80] The Third Circuit found that even though the defendant "surely would not have ended up with all ten kilograms," the distribution of the entire amount would have been within the scope and reasonably foreseeable.[81] The Third Circuit also noted that the defendant failed to introduce evidence to suggest that he did not intend to take the full amount.[82]

F. *Mandatory Minimums – The Last Hope for Reform?*

With the sentencing guidelines rendered advisory and federal judges given greater freedom, the only aspect of sentencing governance left that can be affected is mandatory minimums.[83] To put in perspective how large the population of federal drug offenders affected by mandatory minimums is, 60 percent of those convicted faced mandatory minimums.[84]

There are two exceptions to mandatory minimums: one for substantial assistance and the other which is a "safety valve,"[85] both of which were discussed earlier. To revisit the contexts in which these exceptions were mentioned, the Sessions policy eliminated the Holder-era requirement that prosecutors refuse to charge drug offenders with mandatory minimum triggering quantities if safety valve criteria are met.[86] The substantial assistance exception was mentioned as a means by which prosecutors sought lower sentences, particularly for drug offenders.

Members of Congress, who set mandatory minimum policies, have been alarmed by Sessions' policy, which would change prosecutors'

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78 *Id.* at 742.

79 *Id.* at 744–45.

80 United States v. Parnell, 652 Fed. Appx. 117, 120 (3d Cir. 2016).

81 *Id.*

82 *Id.* at 121.

83 Statutory maximums are another aspect of federal sentencing, but neither Congressional nor Executive action raising nor lowering maximums have been a part of the discussion. FAMILIES AGAINST MANDATORY MINIMUMS, *How Federal Sentencing Works: Mandatory Minimums, Statutory Maximums, and Sentencing Guidelines* (Sept. 5, 2012), https://famm.org/wp-content/uploads/Chart-How-Fed-Sentencing-Works-9.5.pdf.

84 HUMAN RIGHTS WATCH, *supra* note 37.

85 *Id.*

86 2017 MEMORANDUM, *supra* note 1; 2013 MEMORANDUM, *supra* note 5.

approach to using the safety valve exceptions.[87] While neither Holder's nor Sessions' policy explicitly mention the safety valve factors, both address factors similar enough to conclude that recent legislation introduced to address the safety valve exception was prompted by the Sessions policy. The safety valve exception criteria require that: (1) the offender was not a leader in committing the offense, (2) the offender was non-violent in committing the offense, (3) the offender tell the government all that he knows about the offense and related misconduct, and (4) the offense not result in any serious injury.[88] Holder's and Sessions' policies touch on criteria (1), (2), and perhaps (4), which is implied within (2).

Multiple bills have been introduced in the Senate and the House addressing mandatory minimums and, more specifically, the safety valve exception. They include Senator Chuck Grassley's Sentencing Reform and Corrections Act of 2017, Senator Mike Lee's Smarter Sentencing Act of 2017, Senator Rand Paul and Representative Bobby Scott's Justice Safety Valve Act of 2017, and Representative Maxine Waters' Mandatory Minimum Reform Act of 2017.[89]

One of the main goals of Senator Grassley's bill is to reduce mandatory minimums for certain drug offenses, like those involving crack cocaine, while adding new mandatory minimums for crimes that have recently become more common, like trafficking fentanyl-laced heroin.[90] However, the bill also aims to expand safety valve provisions, and would increase sentencing discretion for federal judges.[91] A version of the current bill was last introduced in 2015, and it was considered to be one of the most feasible criminal justice reform efforts in recent years.[92] However, a small group of Republicans, which included then-Senator Sessions, blocked the bill from reaching a vote.[93] This raises questions as to the bill's viability a second time around, with Sessions at the helm of the DOJ.

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[87] Lydia Wheeler, *Lawmakers Unveil Bill to Combat Sessions' Push for Tougher Sentences*, THE HILL (May 16, 2017), https://thehill.com/homenews/senate/333753-lawmakers-unveil-bill-to-combat-sessions-push-for-tougher-sentences.

[88] Charles Doyle, CONG. RESEARCH SERV., *Federal Mandatory Minimum Sentences: The Safety Valve and Substantial Assistance Exceptions* 5–6 (2013).

[89] Sentencing Reform and Corrections Act of 2017, S. 1917, 115th Cong. (2017); Smarter Sentencing Act of 2017, S. 1933, 115th Cong. (2017), Justice Safety Valve Act of 2017, S. 1127, 115th Cong. (2017); Justice Safety Valve Act of 2017, H.R. 2435, 115th Cong. (2017) [hereinafter H.R. 2435]; Mandatory Minimum Reform Act of 2017, H.R. 3800 115th Cong. (2017).

[90] Jordain Carney, *Senators to Reintroduce Bipartisan Criminal Justice Bill*, THE HILL (Sept. 19, 2017, 8:39 PM) http://thehill.com/blogs/floor-action/senate/351471-senators-to-reintroduce-bipartisan-criminal-justice-bill; C.J. Ciaramella, *The Senate Will Try Again on Sentencing Reform This Year*, REASON (Oct. 4, 2017) https://reason.com/2017/10/04/the-senate-will-try-again-on-sentencing/.

[91] Ciaramella, *supra* note 90.

[92] *Id.*

[93] *Id.*

Senator Lee's Smarter Sentencing Act would reduce mandatory minimum sentences for federal drug offenses by half their length or more; life without parole, 20, 10, and 5-year long minimums would be reduced to 25, 10, 5, and 2-year long minimums, respectively.[94] The bill also proposes expanding the safety valve exceptions' applicability from only applying to offenders who have one or no criminal history points, which are based on prior convictions, to now applying to offenders who have three or fewer criminal history points.[95]

Senator Paul and Representative Scott reintroduced their identical bills, the Justice Safety Valve Acts,[96] which give judges authority to sentence below mandatory minimums. Like Senator Grassley's bill, previous iterations of this bill had also been blocked by then-Senator Sessions.[97] Lastly, Representative Waters' bill goes the furthest of all the pieces of criminal justice reform legislation; it would repeal mandatory minimum sentences for all federal drug offenses except for those that involve the highest-level drug traffickers.[98] It should be safe to say that Representative Waters' bill would have the lowest chance of success getting passed by both houses, and an even slimmer chance of gaining support from the Trump Administration.

In fact, it may be too early to say whether any of these bills have a shot of passing. One initial assessment of Senator Grassley's bill perhaps overly optimistically stated that, "It's unclear whether Trump and Attorney General Jeff Sessions, who generally support stricter sentences, would support the legislation,"[99] when, in reality, then-Senator Sessions had been one of the leading opponents against the bill, even calling it "dangerous for America."[100] Sessions also seems to think that he can have a greater impact on criminal justice policy as Attorney General, having recently compared his ability to affect change in his current position to "getting paid for his

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94 FAMILIES AGAINST MANDATORY MINIMUMS, *S. 1933: Smarter Sentencing Act of 2017 (115th Congress)* https://famm.org/s-1933-smarter-sentencing-act-2017-115th-congress/_(last viewed Dec. 30, 2017).

95 *Id.*

96 Justice Safety Valve Act of 2017, *supra* note 89; H.R. 2435, *supra* note 89.

97 N.Y. TIMES EDITORIAL BOARD., *Lurching Backward on Justice Reform* (May 22, 2017) https://www.nytimes.com/2017/05/22/opinion/jeff-sessions-justice-reform.html

98 FAMILIES AGAINST MANDATORY MINIMUMS, *H.R. 3800: Mandatory Minimum Reform Act of 2017 (115th Congress)* https://famm.org/h-r-3800-mandatory-minimum-reform-act-2017-115th-congress/_(last visited Oct. 7, 2020).

99 Jon Street, *Strange Bedfellows on Criminal Justice Reform Could Offer Trump Legislative Win*, THE HILL (Nov. 19, 2017 3:20 PM) http://thehill.com/opinion/criminal-justice/359637-strange-bedfellows-on-criminal-justice-reform-could-offer-trump-a.

100 Carney, *supra* note 90.

words" as a Senator, perhaps a nod to the failed criminal justice reform bills of his former Senate colleagues.[101]

However, political analysts have noted that it would be smart for the Trump Administration to embrace the issue of criminal justice reform, even if only for the reason of having a legislative victory under its belt.[102] For what his opinion is worth, Jared Kushner has been a vocal supporter of criminal justice reform and has met with both Senators Grassley and Durbin, perhaps signaling that the Administration is testing the waters to see if this is an issue it should support.[103] Another surprising supporter of Senator Grassley's bill is the American Conservative Union, the group that organizes the annual Conservative Political Action Conference that hosted President Trump last year.[104]

IV. CONCLUSION

The balance of power to affect criminal justice policy can be summed up as follows: each new Attorney General sets his or her policies, then USAOs enforce those policies by bringing charges and recommending sentences furthering those policies. Federal judges ultimately sentence using their own discretion, advised by the now-optional guidelines from the Sentencing Commission, and following the mandatory minimums set by Congress. In short, the only real power left besides that which judges wield, lies in the hands of Congress in their ability to set mandatory minimums and exceptions.

There are still many questions left unanswered at the end of this analysis of past charging and sentencing practices. Will the more serious charges that were to be brought by prosecutors under the Sessions policy will actually result in longer sentences? Could these reduced sentences that result from plea deals actually be lower than the sentences that follow after trial of a less serious charge?

It is still too early to assess the full effects of the Sessions policy, but if past practices are any indication, prosecutors will continue to exercise discretion in the few ways that they can. And in the ways that they can affect change, they will choose to advocate for shorter sentences for low-

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101 C.J. Ciaramella, *Jeff Sessions is Taking Law Enforcement Back to the 1980s*, REASON (Aug. 4, 2017) https://reason.com/2017/08/04/jeff-sessions-1980s-police-forfeiture/.

102 Street, *supra* note 99.

103 Ciaramella, *supra* note 90.

104 AM. CONSERVATIVE UNION, *ACU Applauds Reintroduction of Sentencing Reform in the Senate from Judiciary Chairman Chuck Grassley* (Oct. 5, 2017) https://conservative.org/article/acu-applauds-reintroduction-sentencing-reform-senate-judiciary-chairman-chuck-grassley; CONSERVATIVE POLITICAL ACTION CONFERENCE, *2017 CPAC Speakers*, AM. CONSERVATIVE UNION http://cpac.conservative.org/cpac-2017-speakers/(last visited Dec. 29, 2017).

level drug offenders, whether it is due to heavy caseloads or sympathy for non-violent, first-time offenders.

Overall, it is likely that this policy helped reduce the problem of variable charging and sentencing across the districts. While the *Booker* decision has created a new danger of increased discrepancy between judges in sentencing, the best solution to this problem was Sessions' policy of enforcing previously existing enhancements that are directly related to the nature of the crimes to increase uniformity in sentencing, achieving both the economic and policy goals that any effort at criminal justice reform aims for.

It remains to be seen what former Attorney General Sessions' legacy will be, and whether his successor will continue his policies. Regardless of who is Attorney General, some will naturally place importance on where he or she stands overall on criminal justice issues. People will place them into discreet categories: is he "tough on crime" or does he take an approach to law enforcement that is more lenient towards low-level offenders? As this comment explained, this is just a convenient political filter, because beyond that filter, there are many other actors and factors that have a much bigger role in determining who wields the power in our criminal justice system.