

Employment Effects of the Minimum Wage

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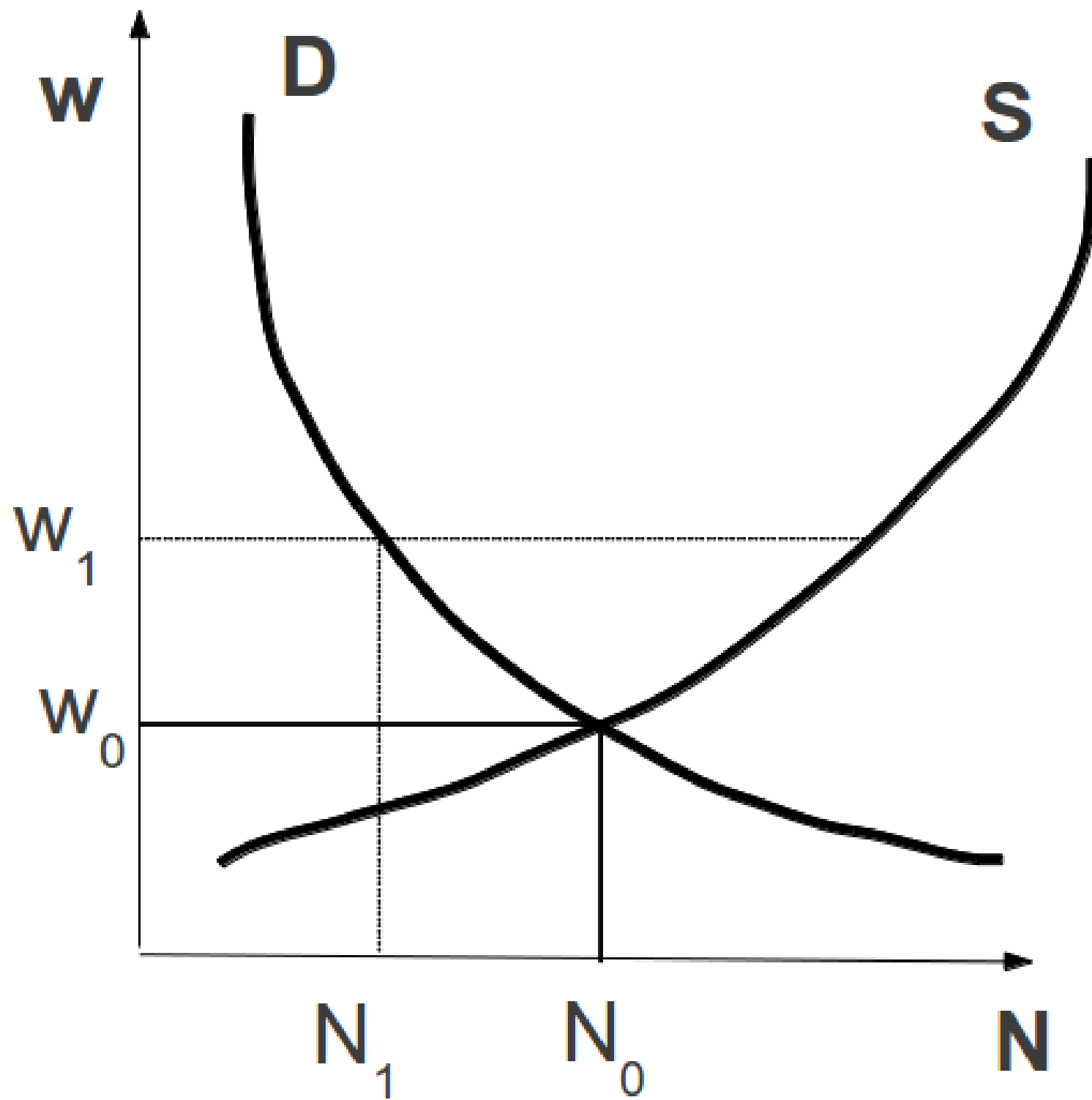
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G-20 Seminar on

“Consistency Between Macroeconomic
and Labor Policies”

Buenos Aires, November 18-19, 2013

The standard, competitive model



Re-evaluating the competitive model

Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania: Reply

By DAVID CARD AND ALAN B. KRUEGER*

Replication and reanalysis are important endeavors in economics, especially when new findings run counter to conventional wisdom. In their Comment on our 1994 *American Economic Review* article, David Neumark and William Wascher (2000) challenge our conclusion that the April 1992 increase in the New Jersey minimum wage led to no loss of employment in the fast-food industry. Using data drawn from payroll records for a set of restaurants initially assembled by Richard Berman of the Employment Policies Institute (EPI) and later supplemented by their own data-collection efforts, Neumark and Wascher (hereafter, NW) conclude that "...the New Jersey minimum-wage increase led to a relative decline

payroll records, led us to draw faulty inferences about the effect of the New Jersey minimum wage.

In this paper we attempt to reconcile the contrasting findings by analyzing administrative employment data from a new representative sample of fast-food employers in New Jersey and Pennsylvania, and by reanalyzing NW's data. Most importantly, we use the Bureau of Labor Statistics's (BLS's) employer-reported ES-202 data file to examine employment growth of fast-food restaurants in a set of major chains in New Jersey and nearby counties of Pennsylvania.¹ We draw two samples from the ES-202 files: a longitudinal file that tracks a

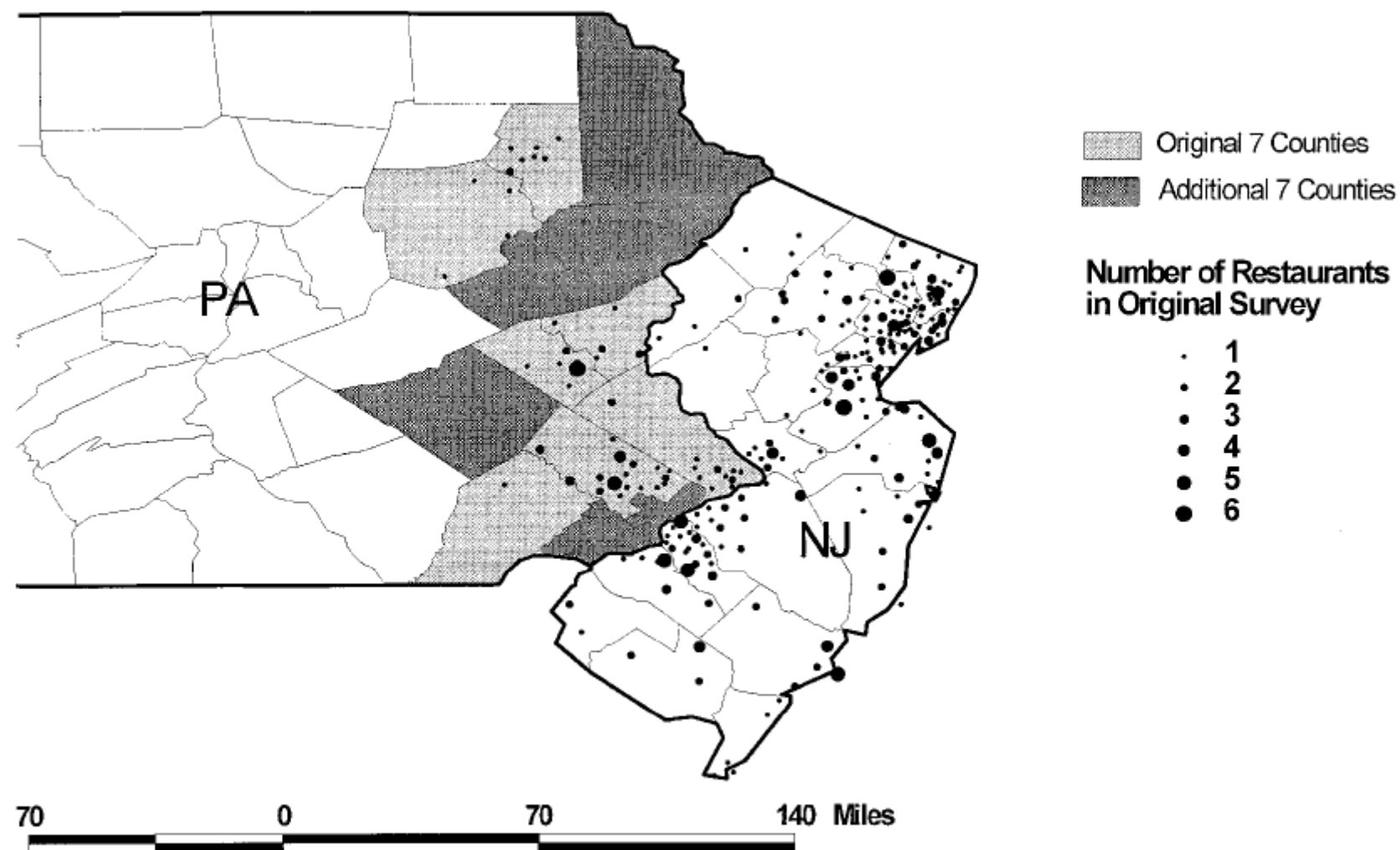


FIGURE 1. AREAS OF NEW JERSEY AND PENNSYLVANIA COVERED BY ORIGINAL SURVEY AND BLS DATA

"The increase in New Jersey's minimum wage probably had no effect on total employment in New Jersey's fast-food industry, and possibly had a small positive effect."

--Card and Krueger, American Economic Review, 2000

MINIMUM WAGE EFFECTS ACROSS STATE BORDERS: ESTIMATES USING CONTIGUOUS COUNTIES

Arindrajit Dube, T. William Lester, and Michael Reich*

Abstract—We use policy discontinuities at state borders to identify the effects of minimum wages on earnings and employment in restaurants and other low-wage sectors. Our approach generalizes the case study method by considering all local differences in minimum wage policies between 1990 and 2006. We compare all contiguous county-pairs in the United States that straddle a state border and find no adverse employment effects. We show that traditional approaches that do not account for local economic conditions tend to produce spurious negative effects due to spatial heterogeneities in employment trends that are unrelated to minimum wage policies. Our findings are robust to allowing for long-term effects of minimum wage changes.

I. Introduction

THE minimum wage literature in the United States can be characterized by two different methodological approaches. Traditional national-level studies use all cross-state variation in minimum wages over time to estimate effects (Neumark & Wascher, 1992, 2007). In contrast, case studies typically compare adjoining local areas with different minimum wages around the time of a policy change. Examples of such case studies include comparisons of New Jersey and Pennsylvania (Card & Krueger, 1994, 2000) and San Francisco and neighboring areas (Dube, Naidu, & Reich, 2007). On balance, case studies have tended to find small or no disemployment effects. Traditional national-level studies, however, have produced a more mixed verdict, with a greater propensity to find negative results.

pairs, this paper generalizes the case study approach by using all local differences in minimum wages in the United States over sixteen and a half years. Our primary focus is on restaurants, since they are the most intensive users of minimum wage workers, but we also examine other low-wage industries, and we use county-level data on earnings and employment from the Quarterly Census of Employment and Wages (QCEW) between 1990 and 2006.

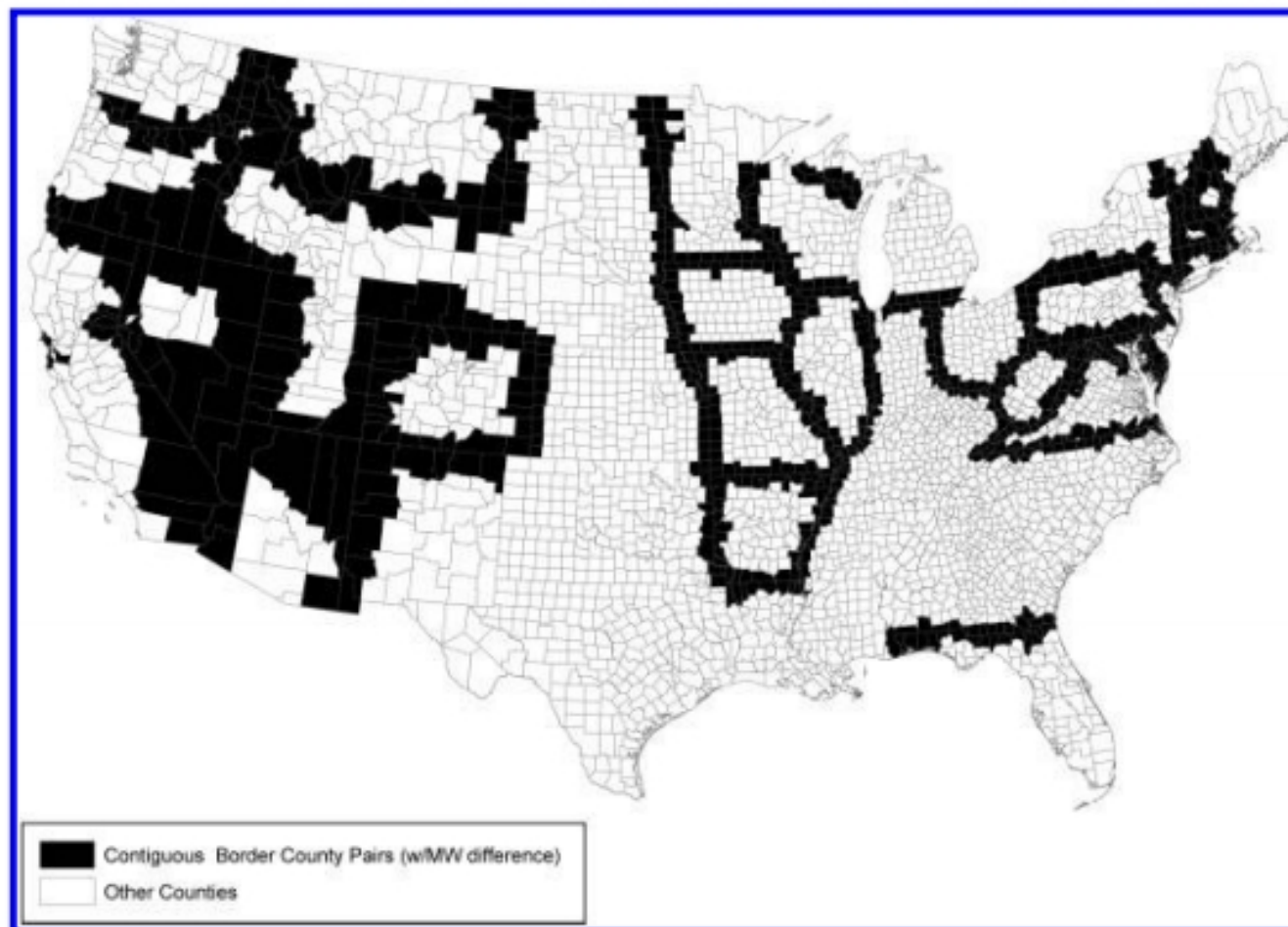
We also estimate traditional specifications with only panel and time period fixed effects, which use all cross-state variations in minimum wages over time. We find that traditional fixed-effects specifications in most national studies exhibit a strong downward bias resulting from the presence of unobserved heterogeneity in employment growth for less skilled workers. We show that this heterogeneity is spatial in nature. We also show that in the presence of such spatial heterogeneity, the precision of the individual case study estimates is overstated. By essentially pooling all such local comparisons and allowing for spatial autocorrelation, we address the dual problems of omitted variables bias and bias in the estimated standard errors.

This research advances the current literature in four ways. First, we present improved estimates of minimum wage effects using local identification based on contiguous country pairs and compare these estimates to national-level estimates using traditional fixed-effects specifications. Both

MINIMUM WAGE EFFECTS ACROSS STATE BOUNDARIES

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FIGURE 2.—CONTIGUOUS BORDER COUNTY-PAIRS IN THE UNITED STATES WITH A MINIMUM WAGE DIFFERENTIAL, 1990–2006Q2



"We compare all contiguous county-pairs in the United States that straddle a state border and find **no adverse employment effects**... Our findings are robust to allowing for long-term effects of minimum wage changes."

--Dube, Lester, and Reich, *Review of Economics and Statistics*, 2010

Publication Selection Bias in Minimum-Wage Research? A Meta-Regression Analysis

Hristos Doucouliagos and T. D. Stanley

Abstract

Card and Krueger's meta-analysis of the employment effects of minimum wages challenged existing theory. Unfortunately, their meta-analysis confused publication selection with the absence of a genuine empirical effect. We apply recently developed meta-analysis methods to 64 US minimum-wage studies and corroborate that Card and Krueger's findings were nevertheless correct. The minimum-wage effects literature is contaminated by publication selection bias, which we estimate to be slightly larger than the average reported minimum-wage effect. Once this publication selection is corrected, little or no evidence of a negative association between minimum wages and employment remains.

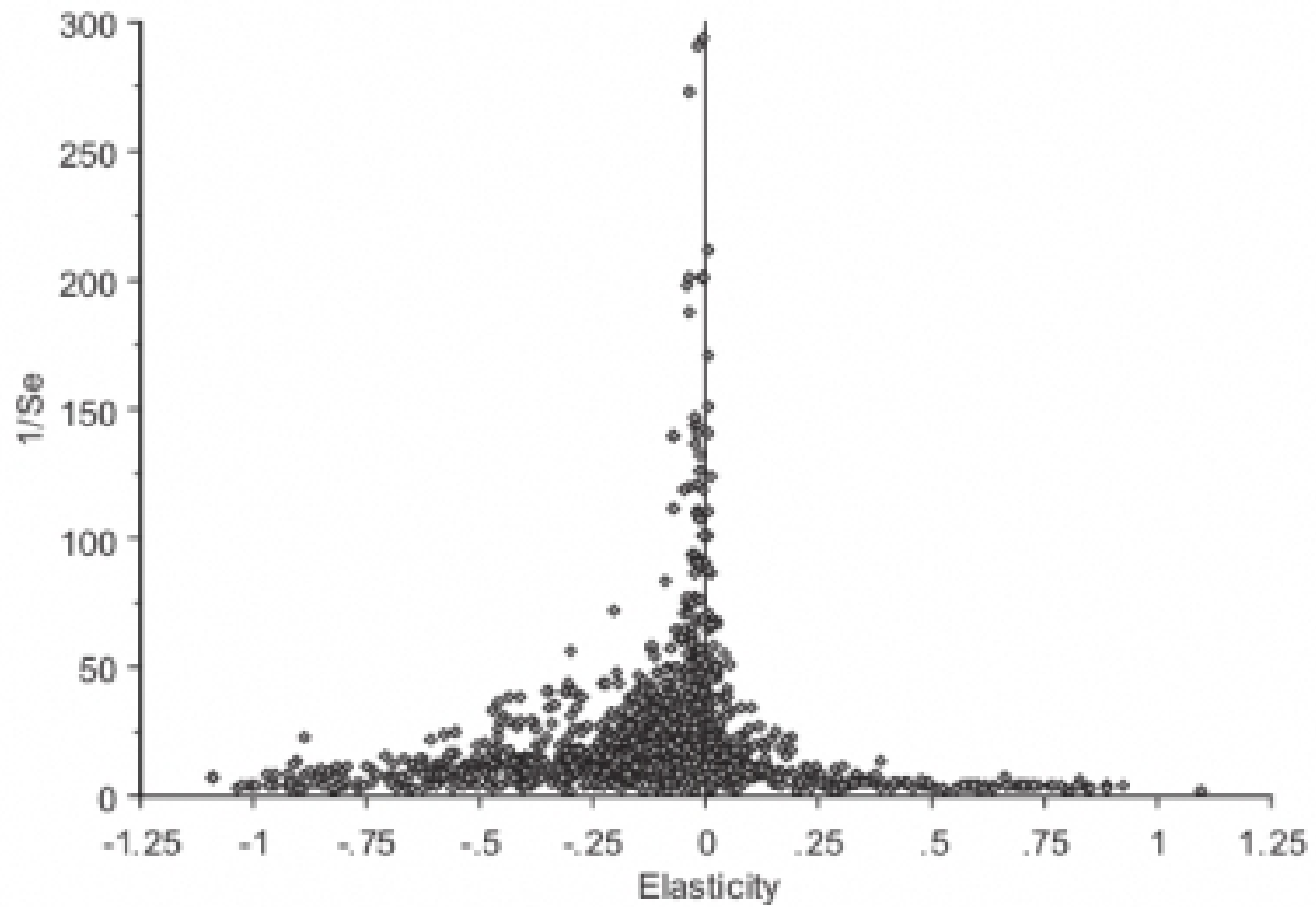
(P)ublication bias is leading to a new formulation of Gresham's law — like bad money, bad research drives out good. (Bland 1988: 450)

"We apply recently developed meta-analysis methods to 64 US minimum-wage studies and corroborate that Card and Krueger's findings were ... correct. The minimum-wage effects literature is contaminated by publication selection bias, which we estimate to be slightly larger than the average reported minimum-wage effect. Once this publication selection is corrected, little or no evidence of a negative association between minimum wages and employment remains."

--Doucouliagos and Stanley, *British Journal of Industrial Relations*, 2009

FIGURE 2

Trimmed Funnel Graph of Estimated Minimum-Wage Effects ($n = 1,424$).



How can this be?

Starting point:

Adjustments imposed by minimum wage are small

TABLE 1
Total wage bill impact of recent minimum-wage increases

	Minimum wage (nominal dollars)	Legislated increase (percent)	Number of full-time equivalent workers affected (thousands)	Share of all employees (percent)	Share of all hours worked (percent)	Average hourly increase for workers receiving an increase (dollars)	Total annual cost of wage increase (billions of dollars)	Total annual wage bill, in sweep (billions of dollars)	Total annual wage bill, all workers (billions of dollars)	Total increase as share of wage bill, in sweep (percent)	Total increase as share of wage bill, all workers (percent)
1989	3.35										
1990	3.80	13.4	3,612,491	4.8	3.6	0.32	2.4	26.2	2,267.4	9.2	0.11
1991	4.25	11.8	4,199,152	5.6	4.2	0.34	3.0	34.2	2,369.0	8.7	0.13
1995	4.25										
1996	4.75	11.8	2,959,023	3.8	2.8	0.41	2.5	26.8	3,068.8	9.4	0.08
1997	5.15	8.4	4,902,738	6.0	4.5	0.26	2.7	49.9	3,242.7	5.3	0.08
2006	5.15										
2007	5.85	13.6	1,214,946	1.3	1.0	0.49	1.2	13.6	5,317.6	9.1	0.02
2008	6.55	12.0	1,936,789	2.1	1.6	0.45	1.8	24.5	5,536.5	7.4	0.03
2009	7.25	10.7	2,407,638	2.7	2.0	0.37	1.9	34.5	5,546.5	5.4	0.03

Notes: Authors' analysis of Current Population Survey.

"Why Does the Minimum Wage Have No Discernible Effect on Employment?"

CEPR Briefing Paper February 2013

1. Reduction in hours worked
2. Reductions in non-wage benefits
3. Reductions in training
4. Changes in employment composition
5. Higher prices

6. Improvements in efficiency
7. "Efficiency wage" responses from workers
8. Wage compression
9. Reduction in profits
10. Increases in demand (minimum wage as stimulus)

11. Reduced turnover

Reduced turnover

(1) Turnover is expensive:

Boushey and Glynn (2012): 20% of annual pay on average, 15% of annual pay for jobs below \$30,000

(2) Significant evidence minimum wage reduces turnover

Dube, Lester, Reich (2012): "striking evidence that separations, new hires, and turnover rates for teens and restaurant workers fall substantially following a minimum wage increase"

Dube, Naidu, Reich (2007), Fairris (2005), Howes (2005), Reich, Hall, and Jacobs (2005)

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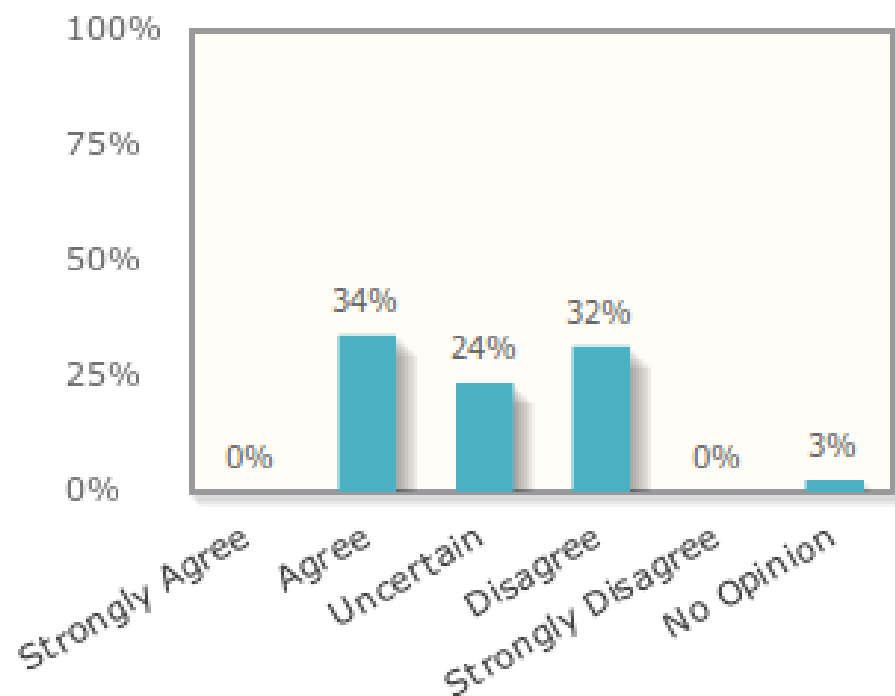
IGM Economic Experts Panel

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"...[about 40] distinguished experts with a keen interest in public policy from the major areas of economics, to be geographically diverse, and to include Democrats, Republicans and Independents as well as older and younger scholars. The panel members are all senior faculty at the most elite research universities in the United States. The panel includes Nobel Laureates, John Bates Clark Medalists, fellows of the Econometric society, past Presidents of both the American Economics Association and American Finance Association, past Democratic and Republican members of the President's Council of Economics, and past and current editors of the leading journals in the profession."

Question A: Raising the federal minimum wage to \$9 per hour would make it noticeably harder for low-skilled workers to find employment.

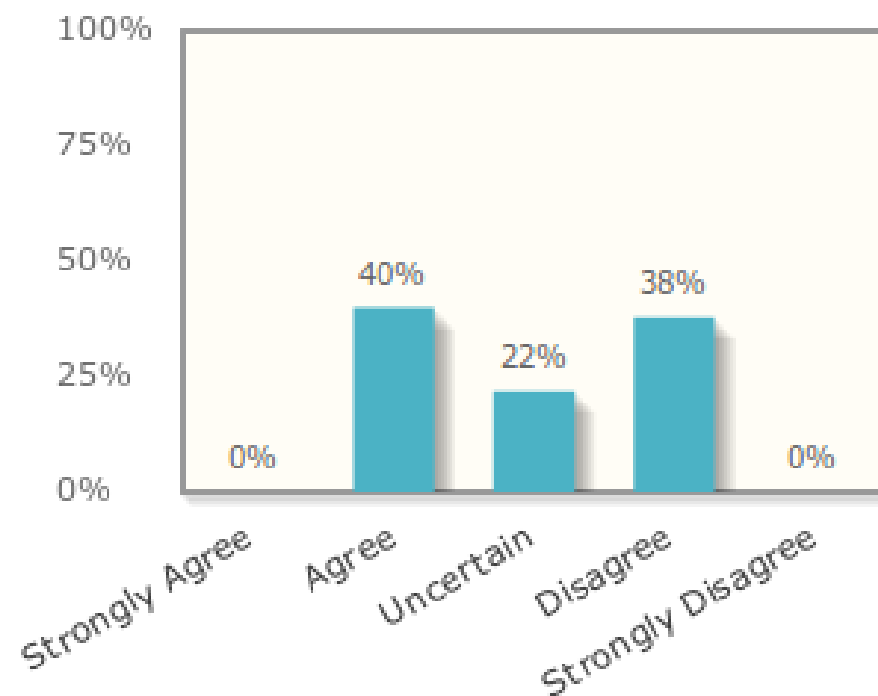
Responses



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Source: IGM Economic Experts Panel
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Responses weighted by each expert's confidence

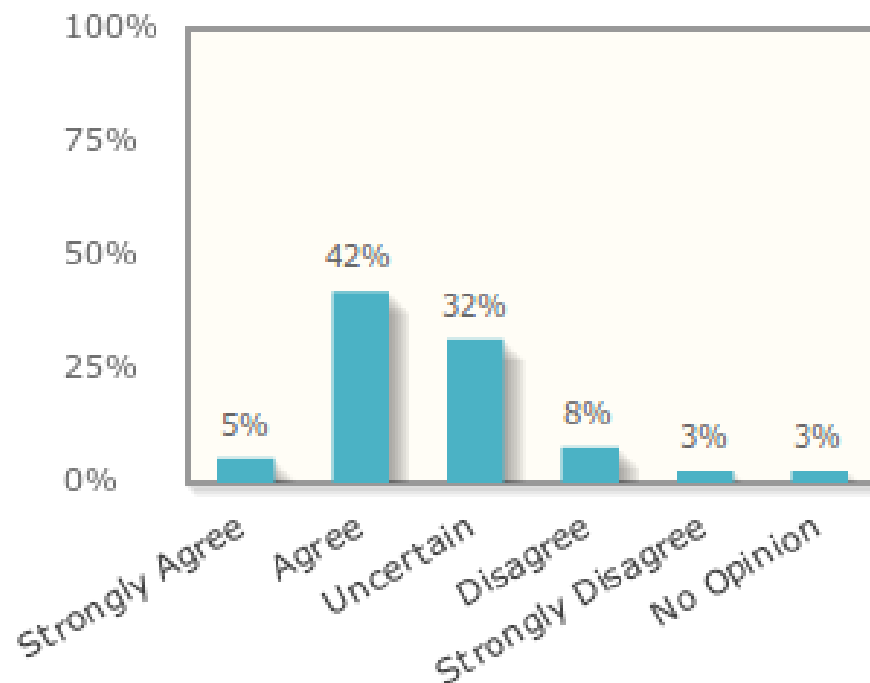


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Source: IGM Economic Experts Panel
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Question B: The distortionary costs of raising the federal minimum wage to \$9 per hour and indexing it to inflation are sufficiently small compared with the benefits to low-skilled workers who can find employment that this would be a desirable policy.

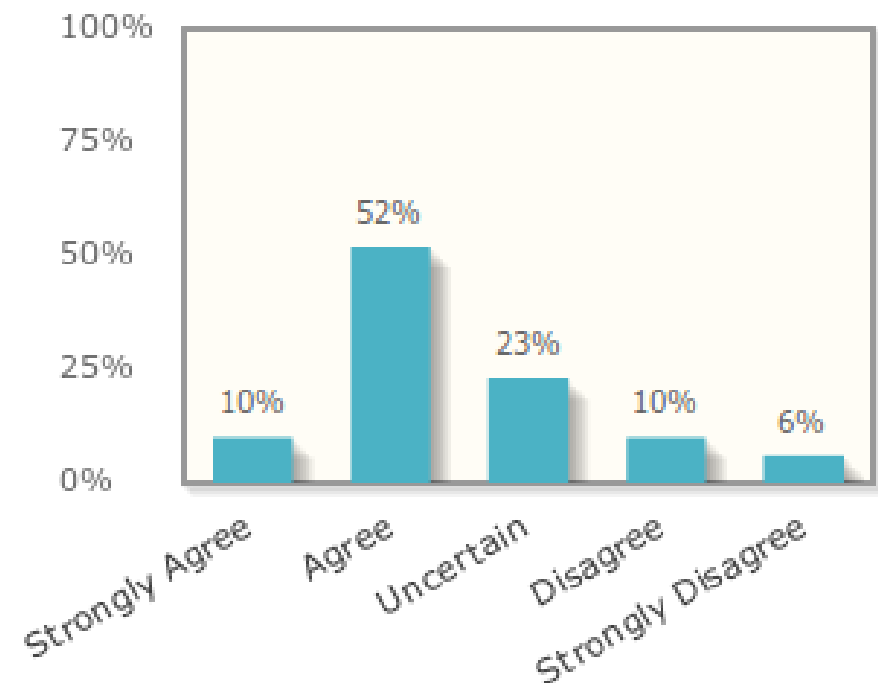
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