A Appendix

A.1 Additional elements on the theory

A.1.1 Sensitivity to parameter variation for local minimum wage increases

In appendix Table A1, we test the sensitivity of our theoretical predictions of a local minimum wage increase (of a fixed percent above the equilibrium oligopsonistic wage in each market) to changes in the following parameters:

- The labor supply elasticity: in our baseline case, the labor supply elasticity is set at 1.6, consistent with the magnitude of the market-level labor supply elasticity estimated in comparable labor markets Azar, Berry and Marinescu (2019). We also move past this baseline and recalculate minimum wage employment effects for a low market-level labor supply elasticity of 1, and a high elasticity of 2.

- The production function exponent for labor: in our baseline case it is set at 0.6, consistent with the labor share in recent years (Karabarbounis and Neiman, 2014; Giandrea and Sprague, 2017). We also recalculate minimum wage employment effects for a low production function exponent of 0.3 and a high production function exponent of 0.9.

Across rows in Table A1, parameters change. For a given minimum wage increase, and a given set of parameters (within columns in Table A1), the employment effect of the minimum wage always increases in HHI. Our predictions are therefore robust to the changes in parameters we examine.

A.1.2 Model simulations for a homogenous minimum wage

A homogenous minimum wage – i.e. the same level for all markets – is more likely to bind and be above marginal productivity in higher HHI markets, because these markets have larger firms and therefore lower marginal productivity.

We simulate employment effects for a low minimum wage set at 50% of the average oligopsony wage across markets, then the minimum wage increases by 10% (medium minimum wage), and finally it increases by 20% (high minimum wage). Model parameters are the same as for our main model.

Appendix Figure A2 shows the results of the model simulations for the homogenous minimum wage increases (as Figure 1 did for local market-specific minimum wage increases). Focusing on Panel B, in the low minimum wage case, there is no effect on employment in the lowest HHI markets. The minimum wage then increases employment for some range of intermediate to high HHI values. If the minimum wage is high enough (medium or high minimum wage), it decreases employment in the highest HHI markets. Higher HHI markets have lower marginal productivity, and this explains why they see the most adverse employment effect from the minimum wage once it is high enough to be binding in these higher HHI markets.

In conclusion, for a uniform minimum wage, employment effects increase in HHI as long as the minimum wage is not too high (and when it is, we see an increasing and then eventual decreasing pattern of employment with HHI).

A.2 Additional tables and figures

Table A1. Theoretical Minimum Wage Effects on log Employment by HHI, using alternative parameters

	Labor supply elasticity			Production function exponent for labor		
	Low	Baseline	High	Low	Baseline	High
	1	1.6	2	0.3	0.6	0.9
Minimum wage 3% above the oligopsonistic wage						
Effect at 0.02 HHI	-0.024	-0.043	-0.049	-0.024	-0.043	-0.171
Effect at 0.25 HHI	0.030	0.047	0.059	0.047	0.047	0.047
Effect at 0.5 HHI	0.030	0.047	0.059	0.047	0.047	0.047
Effect at 1 HHI	0.030	0.047	0.059	0.047	0.047	0.047
12% further increase in the minimum wage						
Effect at 0.02 HHI	-0.283	-0.283	-0.283	-0.162	-0.283	-1.133
Effect at 0.25 HHI	0.113	-0.042	-0.122	-0.044	-0.042	-0.024
Effect at 0.5 HHI	0.113	0.181	0.142	0.137	0.181	0.181
Effect at 1 HHI	0.113	0.181	0.227	0.181	0.181	0.181
40% further increase in the minimum wage						
Effect at 0.02 HHI	-0.841	-0.841	-0.841	-0.481	-0.841	-3.365
Effect at 0.25 HHI	-0.783	-0.841	-0.841	-0.481	-0.841	-3.365
Effect at 0.5 HHI	-0.328	-0.747	-0.841	-0.481	-0.747	-2.303
Effect at 1 HHI	0.336	-0.213	-0.471	-0.220	-0.213	-0.167

Notes: Theoretical model simulations with a uniform minimum wage set as a percent of average oligopsony wages across markets. For more details about the model setup, see section 2.

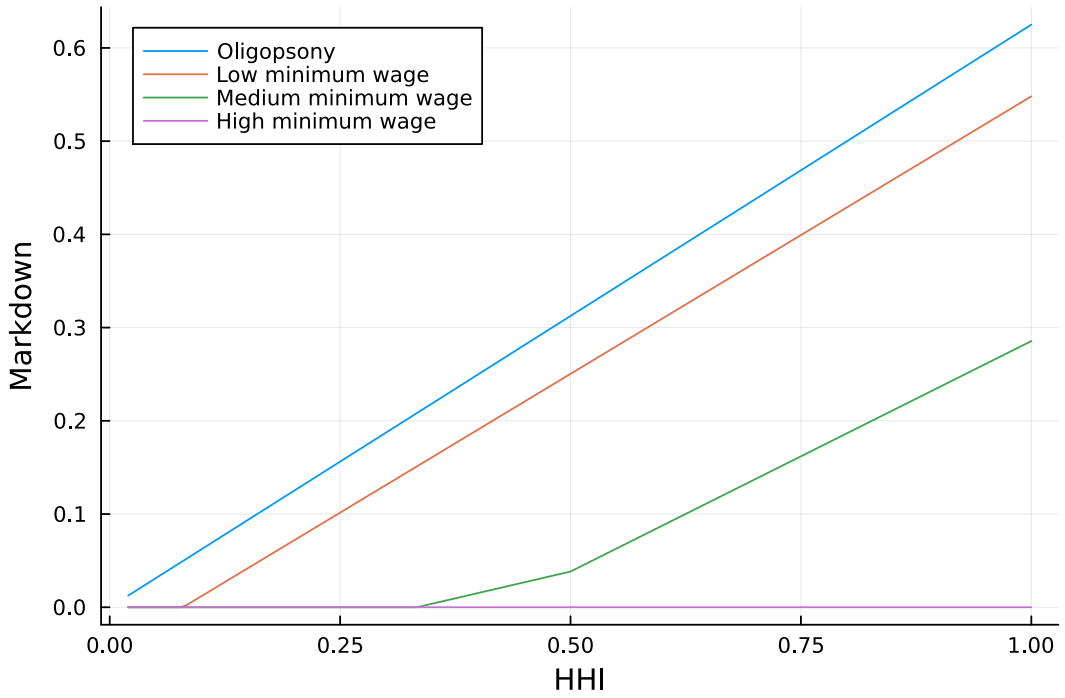

Figure A1. Theoretical effect on markdowns of a homogenous minimum wage increase by labor market concentration (HHI)

Notes: We simulate market-level markdowns as a function of HHI for a minimum wage set first 3% higher than the market-specific oligopsony wage (low minimum wage); then the minimum wage is increased by 12% (medium minimum wage); and finally the minimum wage is increased by 40% (high minimum wage). See more details in in section 2.

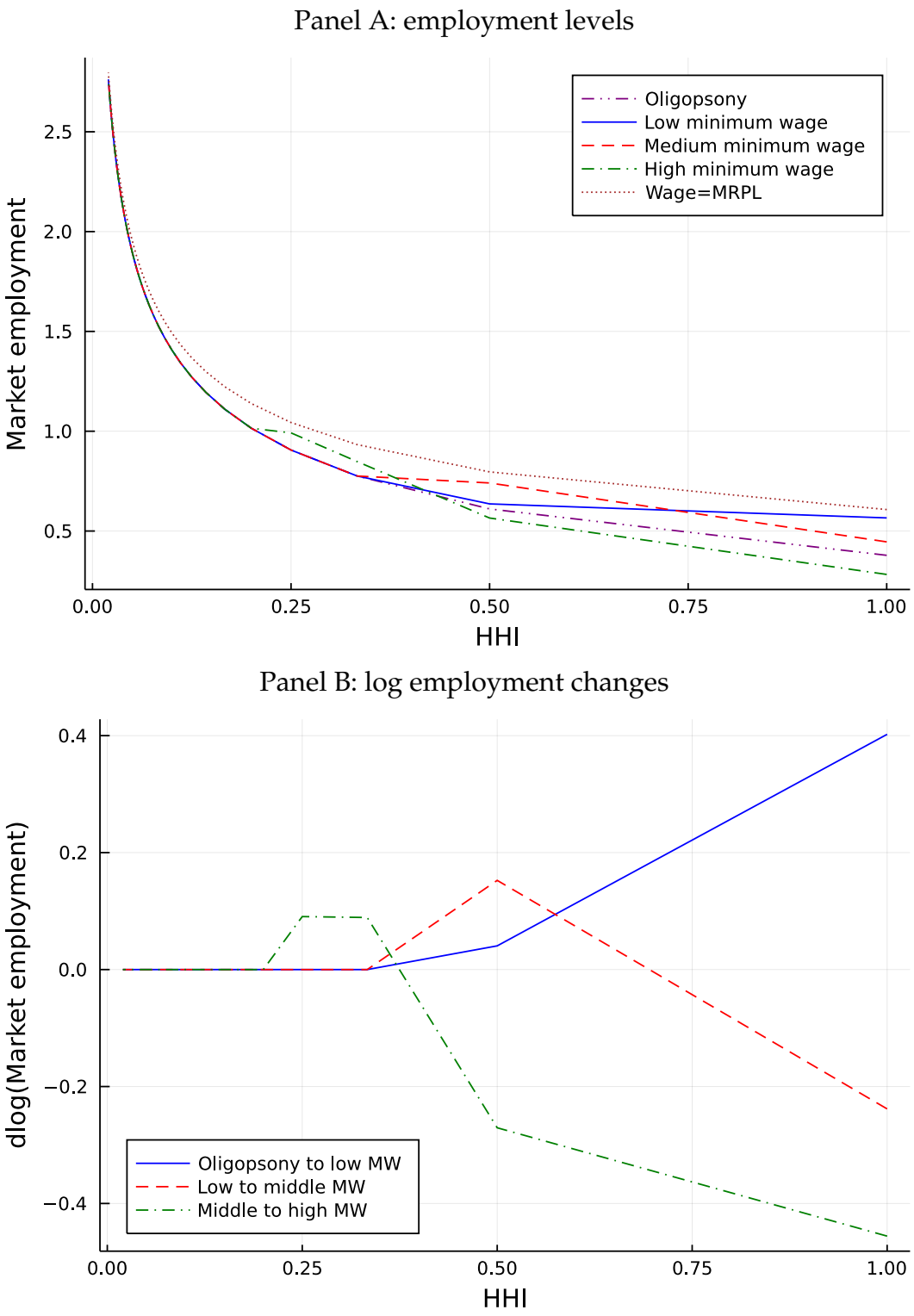

Figure A2. Theoretical effect of a homogenous minimum wage increase by labor market concentration (HHI)

Notes: We simulate market-level employment effects as a function of HHI for a minimum wage set at 50% of the average oligopsony wage across markets (low minimum wage ("MW")), then the minimum wage increases by 10% (medium minimum wage), and finally it increases by 20% (high minimum wage). In panel A, for the brown dotted line, the wage is set equal to the marginal revenue product of labor ("MRPL"). See more details in in section 2.

Table A2. Minimum Wage Effect on Labor Market Concentration in Occupational Labor Markets

	Dependent Variable: Avg HHI		
	Stock Clerks	Retail Sales	Cashiers
	(1)	(2)	(3)
Log Minimum Wage	0.0732	0.00573	0.0752
	(0.121)	(0.125)	(0.158)
County Fixed Effects	X	X	X
Cen. Div. Period Fixed Effects	X	X	X
State-Specific Time Trends	X	X	X
Observations	39,405	48,905	42,284
R-squared	0.678	0.670	0.643

Notes: The table presents estimates of the effect of the minimum wage on labor market concentration for the three low-wage occupations employed in the general merchandise industry studied in the paper. We construct HHI for each of: stock clerks and order fillers (SOC 435081) in column 1; retail salespersons (SOC 412031) in column 2; cashiers (SOC 412011) in column 3. All specifications include county fixed effects, census division specific period fixed effects, state-specific linear time trends. Standard errors (in parenthesis) are clustered at the state level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A3. Minimum Wage Effect on Earnings by High and Low HHI

	Dependent Variable: Log Earnings		
	(1)	(2)	(3)
Low HHI Earnings Elasticity	0.079*	0.070	0.090**
	(0.041)	(0.041)	(0.036)
High HHI Earnings Elasticity	0.098***	0.124***	0.098***
	(0.031)	(0.031)	(0.035)
P-Value on Low=High	0.59	0.20	0.80
County Fixed Effects	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y
State-Specific Time Trends	Y	Y	Y
Additional Controls	Y	Y	Y
adj. R^2	0.839	0.840	0.841
N	56536	57280	56592

Notes: The table replicates the specification of Table 1 with the addition of an indicator for high HHI (HHI above or equal to 0.25) and an interaction term between log minimum wage and this indicator, and reports the resulting earnings elasticity with respect to the minimum wage for the high and low HHI groups. See the notes to Table 2 for further discussion of this variable and the notes to Table 1 for additional details of the specifications. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The row 1 column 2 coefficient has a p-value of 0.100.

Table A4. Minimum wage effect on employment: unweighted and weighted, no HHI

	Dependent Variable: Log Employment	
	Unweighted	Weighted
	(1)	(2)
Log Minimum Wage	0.004	-0.071
	(0.071)	(0.059)
County Fixed Effects	Y	Y
Cen. Div. Period Fixed Effects	Y	Y
State-Specific Time Trends	Y	Y
Additional Controls	Y	Y
adj. R^2	0.9942	0.9980
N	52327	56536

Notes: The table replicates Table 2 without directly controlling for variation across places with differing levels of labor market concentration. In column 1, each county receives equal weight regardless of its level of general merchandise store employment. In column 2, each county is weighted by its quarter 1 employment level in 2010. See Table 2 notes for further details. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A5. Minimum Wage Effect on Earnings by High, Mid and Low HHI

	Dependent Variable: Log Earnings		
	(1)	(2)	(3)
Low HHI Earnings Elasticity	0.066	0.070	0.083*
	(0.053)	(0.044)	(0.043)
Mid HHI Earnings Elasticity	0.107***	0.089***	0.067
	(0.032)	(0.032)	(0.047)
High HHI Earnings Elasticity	0.113**	0.137***	0.144***
	(0.049)	(0.036)	(0.042)
P-Value on Low=Mid	0.56	0.63	0.55
P-Value on Low=High	0.37	0.18	0.32
P-Value on Mid=High	0.91	0.07	0.16
County Fixed Effects	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y
State-Specific Time Trends	Y	Y	Y
Additional Controls	Y	Y	Y
adj. R^2	0.839	0.840	0.841
N	56536	57280	56592

Notes: The table replicates the specification of Table 1 with the addition of an an indicator for high and medium labor market concentration (HHI) tercile, respectively, and an interaction term between log minimum wage and each of these indicators. We report the resulting earnings elasticity with respect to the minimum wage for each tercile. See the notes to Table 2 and the text for further discussion of the HHI variable and the notes to Table 1 for additional details of the specifications. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The row 1 column 2 coefficient has a p-value of 0.100.

Table A6. Minimum Wage Effect on Employment by Occupational Labor Market Concentration - No Sub-National Time Trends (Simple Two Way FE)

	Dependent Variable: Log Employment					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	-0.194**	-0.115	-0.146*	-0.133	-0.193**	-0.118
	(0.084)	(0.076)	(0.082)	(0.081)	(0.090)	(0.072)
Log Min Wage * Avg HHI	0.417***		0.501**		0.418**	
	(0.137)		(0.193)		(0.179)	
Log Min Wage $\times$ HHI$\geq$0.25		0.166**		0.309***		0.168**
		(0.066)		(0.079)		(0.071)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	N	N	N	N	N	N
State-Specific Time Trends	N	N	N	N	N	N
Additional Controls	Y	Y	Y	Y	Y	Y
adj. R^2	0.994	0.994	0.994	0.994	0.994	0.994
N	56536	56536	57280	57280	56592	56592

Notes: The table replicates Table 2 without the inclusion of census division period fixed effects or state-specific linear time trends. See the Table 2 notes for further details. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A7. Minimum Wage Effect on Employment by Concentration in Occupational Labor Market - Using Only Counties with 8 Quarters or More of HHI Data

	Dependent Variable: Log Employment					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	-0.300***	-0.121	-0.222***	-0.164**	-0.314***	-0.141*
	(0.098)	(0.077)	(0.066)	(0.071)	(0.088)	(0.078)
Log Min Wage * Avg HHI	0.885***		0.823***		0.869***	
	(0.180)		(0.236)		(0.151)	
Log Min Wage $\times$ HHI$\geq$0.25		0.277***		0.425***		0.287***
		(0.058)		(0.083)		(0.066)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
adj. R^2	0.994	0.994	0.994	0.994	0.994	0.994
N	47209	47209	56316	56316	49325	49325

Notes: The table replicates Table 2 on the sample of counties for which the average occupational HHI in the county is formed from at least 8 quarters of Burning Glass data (all other specification details are the same). See Table 2 notes for further information. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A8. Earnings Effect for Placebo Test

	Dependent Variable: Log Earnings			
	RN	MA	VN	AA
	(1)	(2)	(3)	(4)
Log Min Wage	0.010	-0.023	0.011	0.007
	(0.068)	(0.072)	(0.068)	(0.062)
adj. R^2	0.856	0.856	0.856	0.786
N	58,025	53,677	57,817	59,345

Notes: The table presents estimates of the earnings elasticity with respect to the minimum wage in sectors with virtually no minimum wage workers - either physicians' offices (columns 1-3), or, accounting, tax preparation, bookkeeping, and payroll service providers (column 4). Columns 1-3 take the log of county-quarter employment in physicians' offices as the outcome; column 4 takes the log of county-quarter employment for accounting, tax preparation, bookkeeping, and payroll service providers as the outcome. In addition to the log of the governing minimum wage as a regressor, all specifications include the same control variables as in Table 2 (see notes). Column 1 (RN) corresponds to the Registered Nurses sample used in Columns 1-2 of Table A9, column 2 (MA) corresponds to the Medical Assistants sample used in Columns 3-4 of that table, column 3 (VN) corresponds to the Vocational Nurses sample used in in Columns 5-6 of that table, and, column 4 (AA) corresponds to the Medical Accountant-Auditor sample used in Columns 7-8 of that table. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A9. Placebo Test Using Occupational Labor Market Concentration in Moderate Income, Above-Minimum Wage Medical and Accounting Professions

	Dependent Variable: Log Employment							
	Registered Nurses		Medical Assistants		Vocational Nurses		Accountant-Auditor	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log Min Wag	-0.195*	-0.163*	-0.010	-0.026	-0.131	-0.096	-0.062	0.037
	(0.102)	(0.089)	(0.152)	(0.105)	(0.123)	(0.092)	(0.127)	(0.129)
Log Min Wage * Avg HHI	0.020		-0.377		-0.153		0.031	
	(0.384)		(0.246)		(0.332)		(0.241)	
Log Min Wage $\times$ HHI $\geq$ 0.25		-0.068		-0.265**		-0.157		-0.120
		(0.149)		(0.109)		(0.117)		(0.156)
adj. R^2	0.990	0.990	0.990	0.990	0.990	0.990	0.980	0.980
N	58025	58025	53677	53677	57817	57817	59345	59345

Notes: The table presents estimates of the employment elasticity with respect to the minimum wage in a sector with virtually no minimum wage workers - either physicians' offices (columns 1-6), or, accounting, tax preparation, bookkeeping, and payroll service providers (columns 7-8) - reporting variation in this estimate across places with differing levels of labor market concentration for four moderate income, non-minimum-wage occupations in the respective sector - registered nurses (SOC 291141) in columns 1-2, medical assistants (SOC 319092) in columns 3-4, practical and licensed vocational nurses (SOC 292061) in columns 5-6, and, accountants and auditors (SOC 132011) in columns 7-8. Columns 1-6 take the log of county-quarter employment in physicians' offices as the outcome; columns 7-8 take the log of county-quarter employment for accounting, tax preparation, bookkeeping, and payroll service providers as the outcome. In addition to the log of the governing minimum wage as a regressor, all specifications include the interaction of this variable with either the average HHI for the occupation (in odd-numbered columns) or an indicator for whether this HHI is above 0.25 (in even-numbered columns), with everything else the same as in Table 2 (see notes). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A10. Minimum Wage Effect on Employment by Concentration (weighted average HHI across 3 occupations)

	Dependent Variable: Log Employment	
	(1)	(2)
Log Min Wage	-0.233**	-0.149*
	(0.0958)	(0.0844)
Log Min Wage * Avg HHI	0.839***	
	(0.253)	
Log Min Wage × High HHI		0.366***
		(0.0730)
County Fixed Effects	Y	Y
Cen. Div. Period Fixed Effects	Y	Y
State-Specific Time Trends	Y	Y
Additional Controls	Y	Y
Observations	54,398	54,398
R-squared	0.994	0.994

Notes: The table presents estimates of the employment elasticity with respect to the minimum wage, and, variation in this estimate across places with differing levels of labor market concentration for key low-wage occupations. All specifications in the table take the log of county-quarter general merchandise store employment as the outcome. In addition to the log of the governing minimum wage as a regressor, all specifications include the interaction of this variable with labor market concentration (HHI). The HHI is a weighted average of the HHIs for each of the three key low-wage occupational labor markets in the industry: stock clerks and order fillers (SOC 435081), retail salespersons (SOC 412031), and cashiers (SOC 412011). The HHIs in the three occupations are correlated, with a correlation of 0.61 between the first two, 0.59 between the last two, and 0.66 between the first and last occupation. The weights used for the weighted average are the shares of each of the occupations among total vacancies for all three occupations in the county and quarter. In column 1, the concentration measure is the county's Herfindahl-Hirschman Index (HHI) for the relevant labor market (averaged across all quarters of the 2010-2016 sample period), and, we report its interaction with the log minimum wage. In column 2, we instead report the interaction of log minimum wage with a binary concentration measure that separates high and low concentration labor markets based on whether their labor market HHI is above or below 0.25 (the Department of Justice/ Federal Trade Commission threshold for highly concentrated markets). All specifications further include county fixed effects, census division specific period fixed effects, state-specific linear time trends, and, the following additional control variables: log of county total population, the log of total average weekly earnings (across all sectors) in the county, the log of total employment (across all sectors) in the county, the log of the county unemployment rate. Standard errors (in parenthesis) are clustered at the state level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A11. Minimum Wage Effect on Employment by Concentration in Occupational Labor Market – HHI reflects across occupations transitions

	Dependent Variable: Log Employment					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	-0.318***	-0.173**	-0.210***	-0.162**	-0.325***	-0.157**
	(0.0956)	(0.0845)	(0.0737)	(0.0737)	(0.115)	(0.0739)
Log Min Wage * Avg HHI	0.624***		0.644***		0.654***	
	(0.154)		(0.190)		(0.208)	
Log Min Wage × High HHI		0.261***		0.366***		0.244***
		(0.0652)		(0.0754)		(0.0583)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
adj. R^2	0.994	0.994	0.995	0.995	0.994	0.994
N	55,131	55,131	57,151	57,151	55,375	55,375

Notes: The table uses the specifications from Table 2, but the HHI is replaced with a version of the HHI that accounts for transitions to other occupations. For stock clerks, for instance, we use the transition matrix from stock clerks to all other SOC-6 from Schubert, Stansbury and Taska (2022). We compute the HHI following the methodology of Arnold (2021) to include vacancies from occupations other than the focal occupation in the calculation of the market shares. The method gives lower weight to the vacancies that are in occupations that are inferred to be less valuable to workers in the focal occupation based on their relative transition rates and market shares. We repeat the equivalent procedure to obtain HHIs for retail sales and cashiers. Standard errors (in parenthesis) are clustered at the state level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A12. Minimum Wage Effect on Employment by Concentration in Occupational Labor Market - Not Controlling for Average Local Earnings

	Dependent Variable: Log Employment					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	-0.311***	-0.179**	-0.219***	-0.169**	-0.310***	-0.183**
	(0.083)	(0.075)	(0.065)	(0.072)	(0.094)	(0.077)
Log Min Wage * Avg HHI	0.691***		0.786***		0.718***	
	(0.154)		(0.220)		(0.195)	
Log Min Wage × High HHI		0.285***		0.426***		0.303***
		(.061)		(0.082)		(0.068)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
adj. R^2	0.9942	0.9942	0.9943	0.9943	0.9942	0.9942
N	56536	56536	57280	57280	56592	56592

Notes: The table replicates Table 2 without the inclusion of a control for the log of total average weekly earnings (across all sectors) in the county. See Table 2 notes for further information. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A13. Minimum Wage Effect on Employment by Occupational Labor Market Concentration Controlling for Productivity Proxy and Population Density

	Dependent Variable: Log Employment					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	-0.283***	-0.162**	-0.197***	-0.155**	-0.278***	-0.166**
	(0.0817)	(0.0761)	(0.0627)	(0.0702)	(0.0932)	(0.0777)
Log Min Wage * Avg HHI	0.630***		0.713***		0.649***	
	(0.144)		(0.208)		(0.186)	
Log Min Wage × HHI≥0.25		0.261***		0.394***		0.279***
		(0.0593)		(0.0766)		(0.0673)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
adj. R^2	0.994	0.994	0.994	0.994	0.994	0.994
N	56536	56536	57280	57280	56592	56592

Notes: The table replicates Table 2 with the inclusion of population density as a regressor. The productivity proxy - the log of total average weekly earnings (across all sectors) in the county - is also included, as it was originally in 2. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A14. Minimum Wage Effect on Employment by Occupational Labor Market Concentration - MW Also Interacted with Productivity and Population Density

	Dependent Variable: Log Employment					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	-1.403	-0.672	-0.733	-0.538	-1.254	-0.864
	(1.324)	(1.292)	(1.109)	(1.163)	(1.225)	(1.217)
Log Min Wage * Avg HHI	1.058***		0.970***		0.988***	
	(0.208)		(0.273)		(0.297)	
Log Min Wage × HHI≥0.25		0.309***		0.484***		0.309***
		(0.075)		(0.093)		(0.070)
Log Min Wage × Log Density	0.073*	0.001	0.034	0.023	0.050	-0.012
	(0.037)	(0.032)	(0.040)	(0.035)	(0.042)	(0.028)
Log Min Wage × Productivity	0.091	0.072	0.047	0.037	0.091	0.110
	(0.219)	(0.207)	(0.193)	(0.195)	(0.201)	(0.195)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
adj. R^2	0.994	0.994	0.994	0.994	0.994	0.994
N	56536	56536	57280	57280	56592	56592

Notes: The table replicates Table 2 with the addition of the following: an interaction term between log minimum wage and the proxy for productivity, the log of total average weekly earnings (across all sectors) in the county; and, an interaction term between log minimum wage and log population density; and, the productivity proxy and log population density base terms. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A15. Minimum Wage Effect on Employment with MW Interacted with either Population Density or a proxy for Productivity (Absent Occupational Labor Market Concentration)

	Dependent Variable: Log Employment					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	0.209	1.163	0.248*	1.257	0.259**	1.332
	(0.127)	(0.967)	(0.128)	(0.935)	(0.128)	(0.925)
Log Min Wage × Log Density	-0.0462**		-0.0521**		-0.0518**	
	(0.0206)		(0.0213)		(0.0212)	
Log Min Wage × Log Average County Earnings		-0.174		-0.186		-0.196
		(0.146)		(0.141)		(0.140)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
adj. R^2	0.994	0.994	0.994	0.994	0.994	0.994
N	56,536	56,536	57,280	57,280	56,592	56,592

Notes: The table uses the specifications from Table 2 (odd columns). The difference with that table is that labor market HHI (and its interaction with log minimum wage) is dropped from the regressions and replaced by two other variables: either log population density (and its interaction with log minimum wage), in Columns 1, 3, and 5; or, log average weekly earnings in the county across all sectors (and its interaction with log minimum wage), in Columns 2, 4, and 6. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A16. Minimum Wage Effect on Employment with MW Interacted with (Terciles for) either Population Density or a proxy for Productivity (Absent Occupational Labor Market Concentration)

	Dependent Variable: Log Employment					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	0.110	0.0488	0.128	0.0603	0.142	0.0696
	(0.0906)	(0.0967)	(0.0879)	(0.0969)	(0.0897)	(0.0963)
Log Min Wage × MidTercileLogDensity	-0.0545		-0.0647		-0.0621	
	(0.113)		(0.106)		(0.114)	
Log Min Wage × HighTercileLogDensity	-0.268***		-0.271***		-0.278***	
	(0.0939)		(0.0930)		(0.0957)	
Log Min Wage × MidTercileLogAverageEarnings		-0.0423		-0.0385		-0.0357
		(0.0648)		(0.0680)		(0.0642)
Log Min Wage × HighTercileLogAverageEarnings		-0.0627		-0.0590		-0.0570
		(0.102)		(0.102)		(0.0988)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
adj. R^2	0.994	0.994	0.995	0.995	0.994	0.994
N	56,536	56,536	57,280	57,280	56,592	56,592

Notes: The table uses the specifications from Table A16 (see that table's notes) with one change: instead of an interaction between log minimum wage and either log population density (even columns) or log average weekly earnings in the county across all sectors (odd columns) we include indicators for whether a place is in the high or medium tercile of log density/log earnings and an interaction of each indicator with log minimum wage. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A17. Impact of minimum wage on the wage distribution, by level of HHI

	Overall		Restaurants		Retail	
	HHI<0.25	HHI≥ 0.25	HHI<0.25	HHI≥ 0.25	HHI<0.25	HHI≥ 0.25
	(1)	(2)	(3)	(4)	(5)	(6)
Missing jobs below MW (Δ b)	-0.019***	-0.026***	-0.098***	-0.131***	-0.032***	-0.043***
	(0.005)	(0.007)	(0.020)	(0.043)	(0.004)	(0.015)
Excess jobs above MW (Δ a)	0.017***	0.051***	0.097***	0.139***	0.033***	0.111***
	(0.003)	(0.013)	(0.016)	(0.050)	(0.010)	(0.032)
%Δ affected wages	0.047***	0.132***	0.049***	0.047	0.049*	0.118***
	(0.010)	(0.032)	(0.012)	(0.029)	(0.025)	(0.029)
%Δ affected employment	-0.024	0.239*	-0.003	0.015	0.008	0.376**
	(0.031)	(0.132)	(0.028)	(0.066)	(0.078)	(0.166)
Employment elasticity w.r.t. MW	-0.021	0.258*	-0.011	0.084	0.010	0.694**
	(0.027)	(0.143)	(0.122)	(0.361)	(0.105)	(0.307)
Emp. elasticity w.r.t. affected wage	-0.503	1.816***	-0.054	0.330	0.157	3.179***
	(0.664)	(0.672)	(0.574)	(1.287)	(1.531)	(1.146)
Below Share ($\bar{b}_{-1}$)	0.085	0.106	0.422	0.537	0.132	0.181
%Δ MW	0.098	0.098	0.098	0.098	0.098	0.098
# of events	118	118	118	118	118	118
# of workers in the sample	2,084,106	542,011	121,300	33,632	244,721	67,210

Notes: The table shows the bunching estimates of the impact of the minimum wage a la Cengiz et al. (2019) Table 3, for low (HHI<0.25) and high (HHI≥0.25) concentration labor markets. HHI is the vacancy-weighted average of the county-SOC HHIs by State x Metropolitan/Non-Metropolitan pair (see text for more details). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A18. Impact of minimum wage on the wage distribution, by metropolitan status

	Overall		Restaurants		Retail	
	Metropolitan (1)	Non-Metropolitan (2)	Metropolitan (3)	Non-Metropolitan (4)	Metropolitan (5)	Non-Metropolitan (6)
Missing jobs below MW (Δ b)	-0.019***	-0.026***	-0.098***	-0.129***	-0.032***	-0.044***
	(0.005)	(0.007)	(0.019)	(0.040)	(0.004)	(0.015)
Excess jobs above MW (Δ a)	0.017***	0.050***	0.096***	0.145***	0.033***	0.105***
	(0.003)	(0.013)	(0.016)	(0.052)	(0.010)	(0.030)
%Δ affected wages	0.047***	0.127***	0.049***	0.051*	0.049*	0.114***
	(0.011)	(0.032)	(0.013)	(0.030)	(0.025)	(0.028)
%Δ affected employment	-0.025	0.227*	-0.005	0.029	0.008	0.350**
	(0.031)	(0.130)	(0.027)	(0.063)	(0.078)	(0.162)
Employment elasticity w.r.t. MW	-0.021	0.241*	-0.023	0.159	0.010	0.628**
	(0.027)	(0.138)	(0.118)	(0.348)	(0.105)	(0.292)
Emp. elasticity w.r.t. affected wage	-0.518	1.778**	-0.108	0.572	0.158	3.060**
	(0.659)	(0.675)	(0.570)	(1.071)	(1.537)	(1.154)
Below Share ($\bar{b}_{-1}$)	0.085	0.104	0.423	0.539	0.132	0.176
%Δ MW	0.098	0.098	0.098	0.098	0.098	0.098
# of events	118	118	118	118	118	118
# of workers in the sample	2,056,960	574,266	122,274	33,086	241,037	71,693

Notes: The table shows the bunching estimates of the impact of the minimum wage a la Cengiz et al. (2019) Table 3, estimated separately for metropolitan and non-metropolitan areas. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

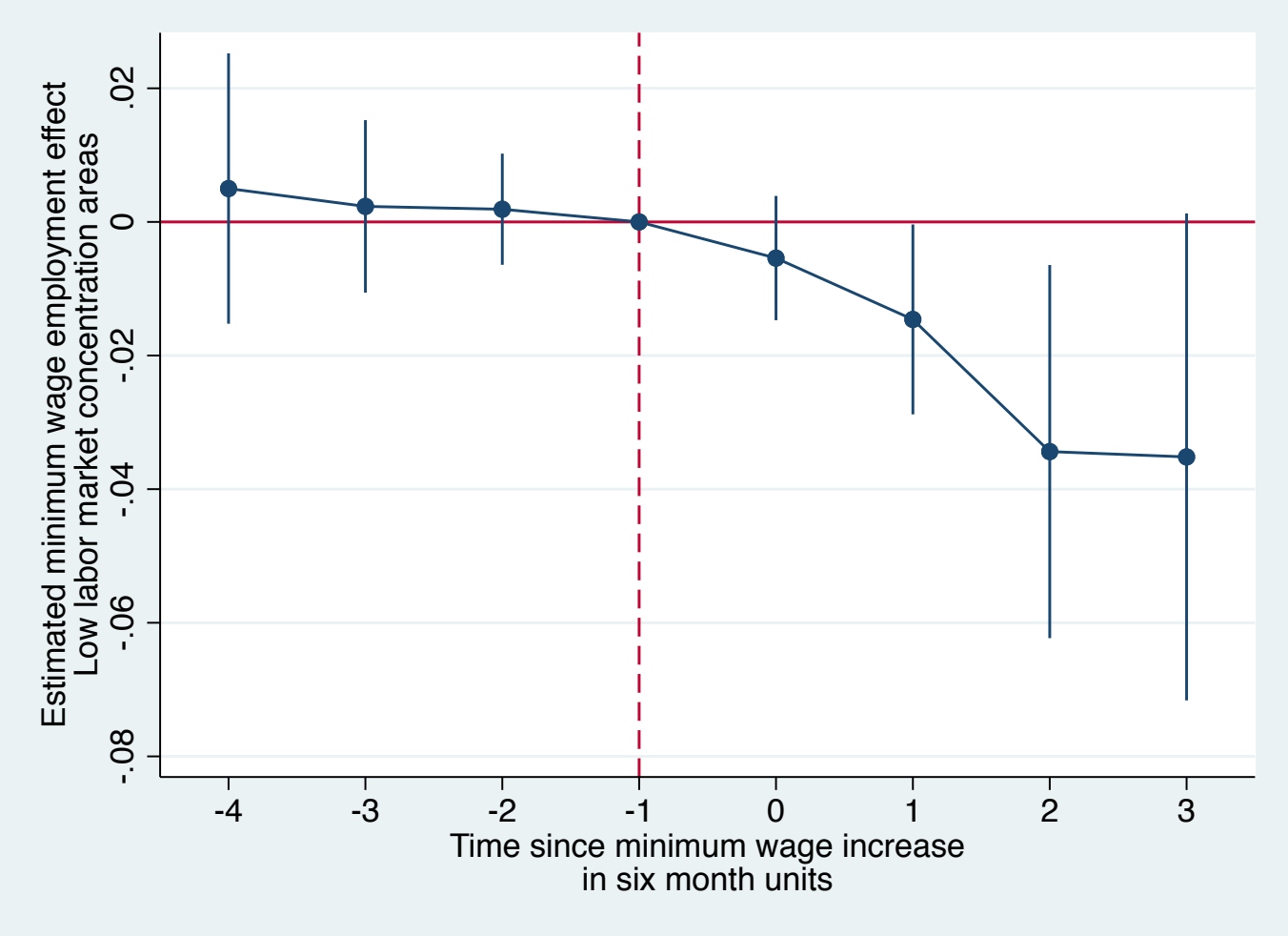

Figure A3. Event-study Estimate of Minimum Wage Employment Effect in Low Concentration Stock Clerk Occupational Labor Markets

Notes: The figure reports the event-study estimates of α and ρ derived from the first event-study specification in Section 4.2.3 when using the sample of locations where stock clerk occupational labor market concentration levels are low ($HHI < 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). See text for further model details.

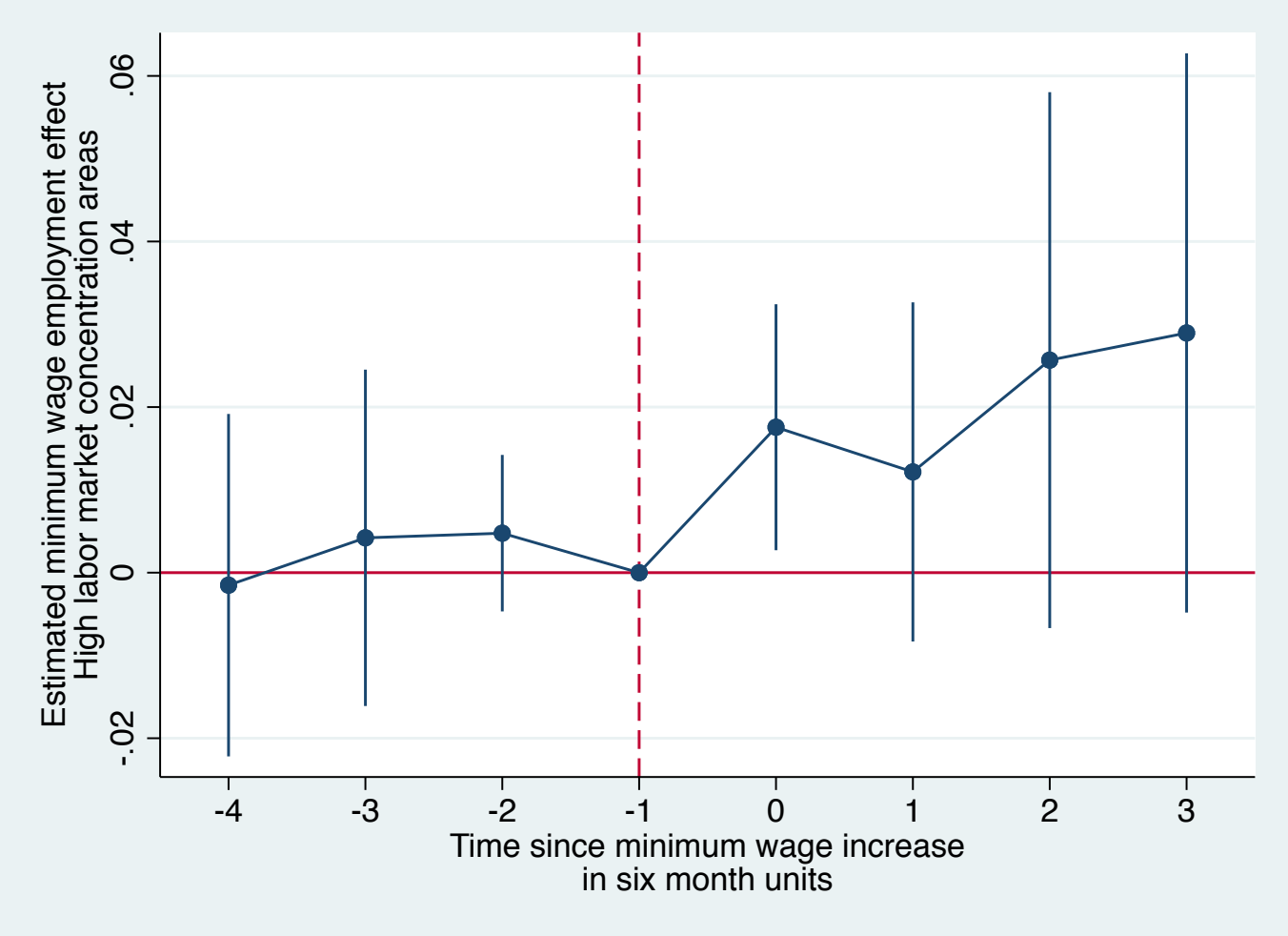

Figure A4. Event-study Estimate of Minimum Wage Employment Effect in High Concentration Stock Clerk Occupational Labor Markets

Notes: The figure reports the event-study estimates of α and ρ derived from the first event-study specification in Section 4.2.3 when using the sample of locations where stock clerk occupational labor market concentration levels are high ($HHI \geq 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). See text for further model details.

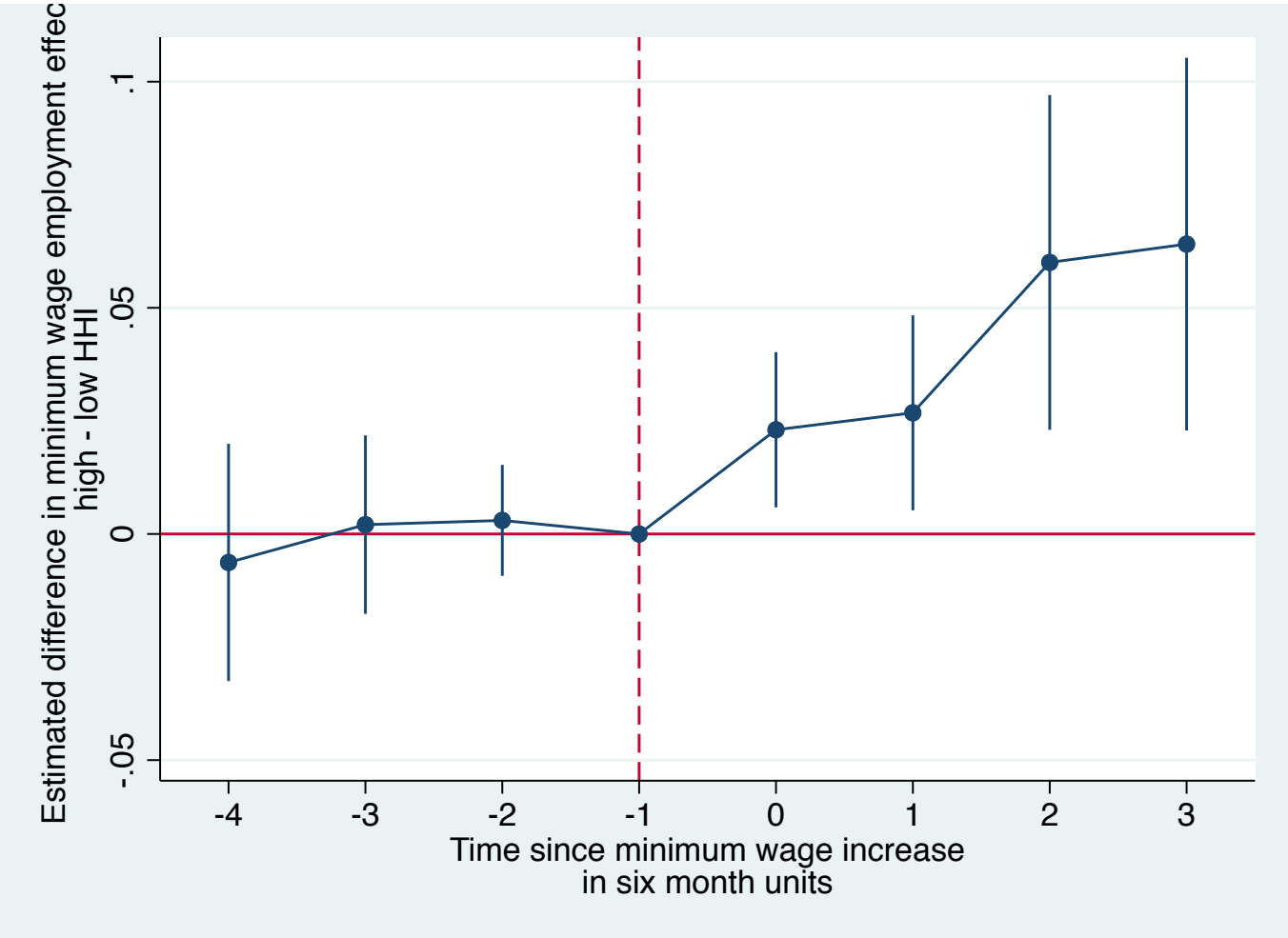

Figure A5. Estimated Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration in the Stock Clerk Occupational Labor Market

Notes: The figure reports the event-study estimates of λ and ρ derived from the second event-study specification in Section 4.2.3 when defining high and low labor market concentration levels over the stock clerk occupational labor market. Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). Estimates measure the evolution in the difference in log general merchandise store employment between eventually treated counties and control counties in stock clerk labor markets with high concentration ($HHI \geq 0.25$) net of this difference in low concentration areas (relative to the difference in this difference in the six months before the minimum wage increased) after adjusting for model covariates. See text for further model details.

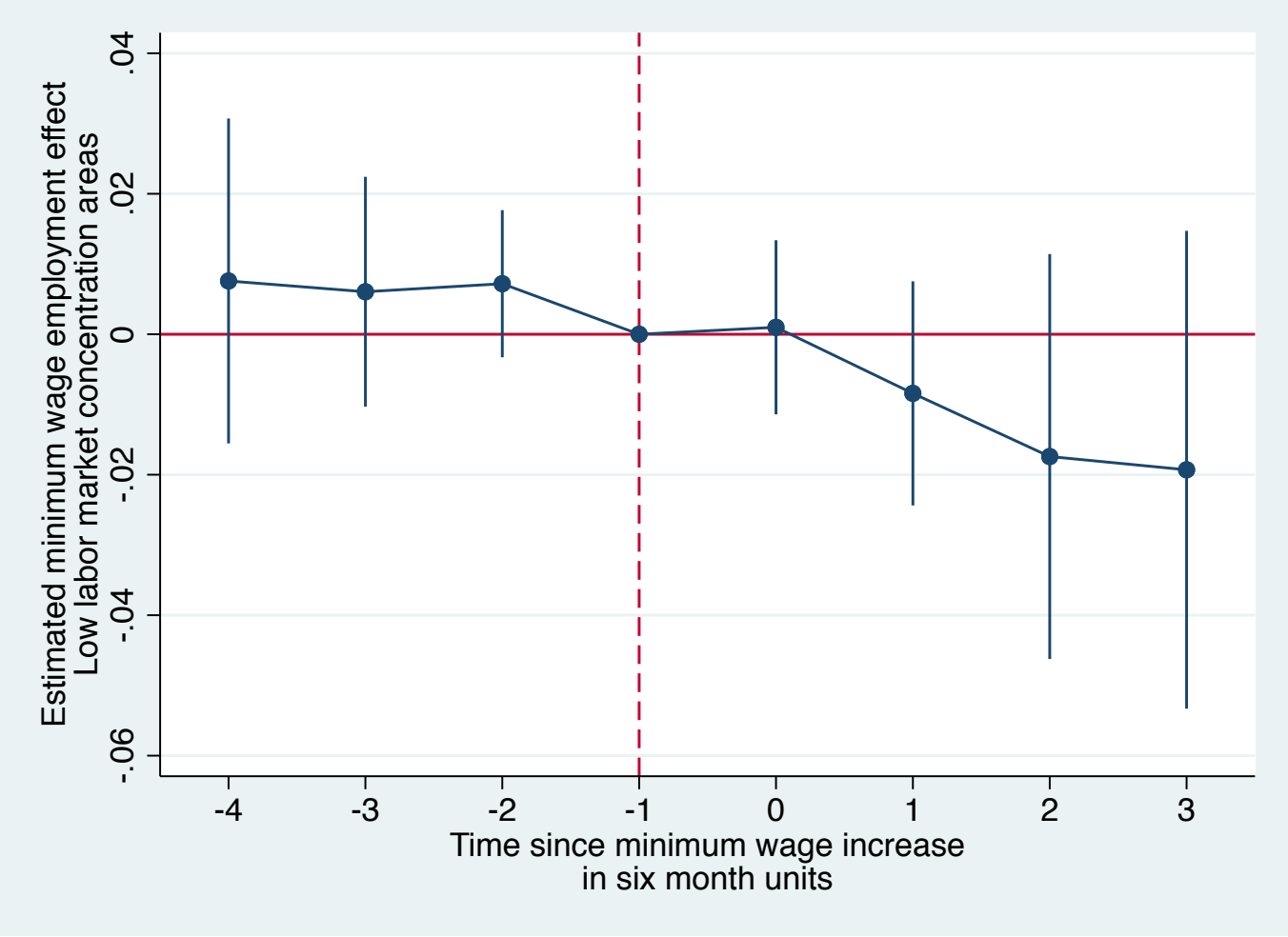

Figure A6. Event-study Estimate of Minimum Wage Employment Effect in Low Concentration Retail Sales Occupational Labor Markets

Notes: The figure reports the event-study estimates of α and ρ derived from the first event-study specification in Section 4.2.3 when using the sample of locations where retails sales occupational labor market concentration levels are low ($HHI < 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). See text for further model details.

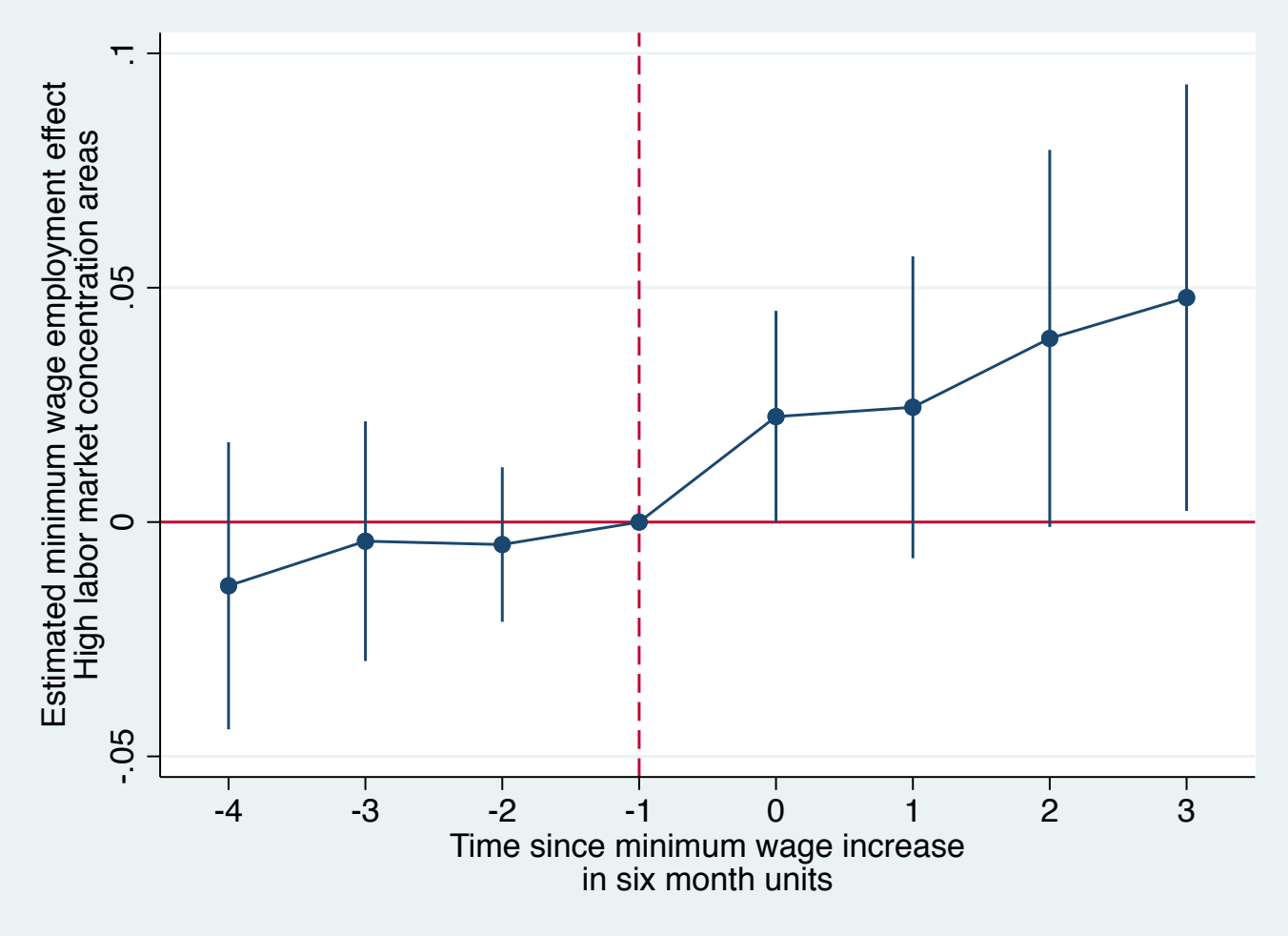

Figure A7. Event-study Estimate of Minimum Wage Employment Effect in High Concentration Retail Sales Occupational Labor Markets

Notes: The figure reports the event-study estimates of α and ρ derived from the first event-study specification in Section 4.2.3 when using the sample of locations where retail sales occupational labor market concentration levels are high ($HHI \geq 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). See text for further model details.

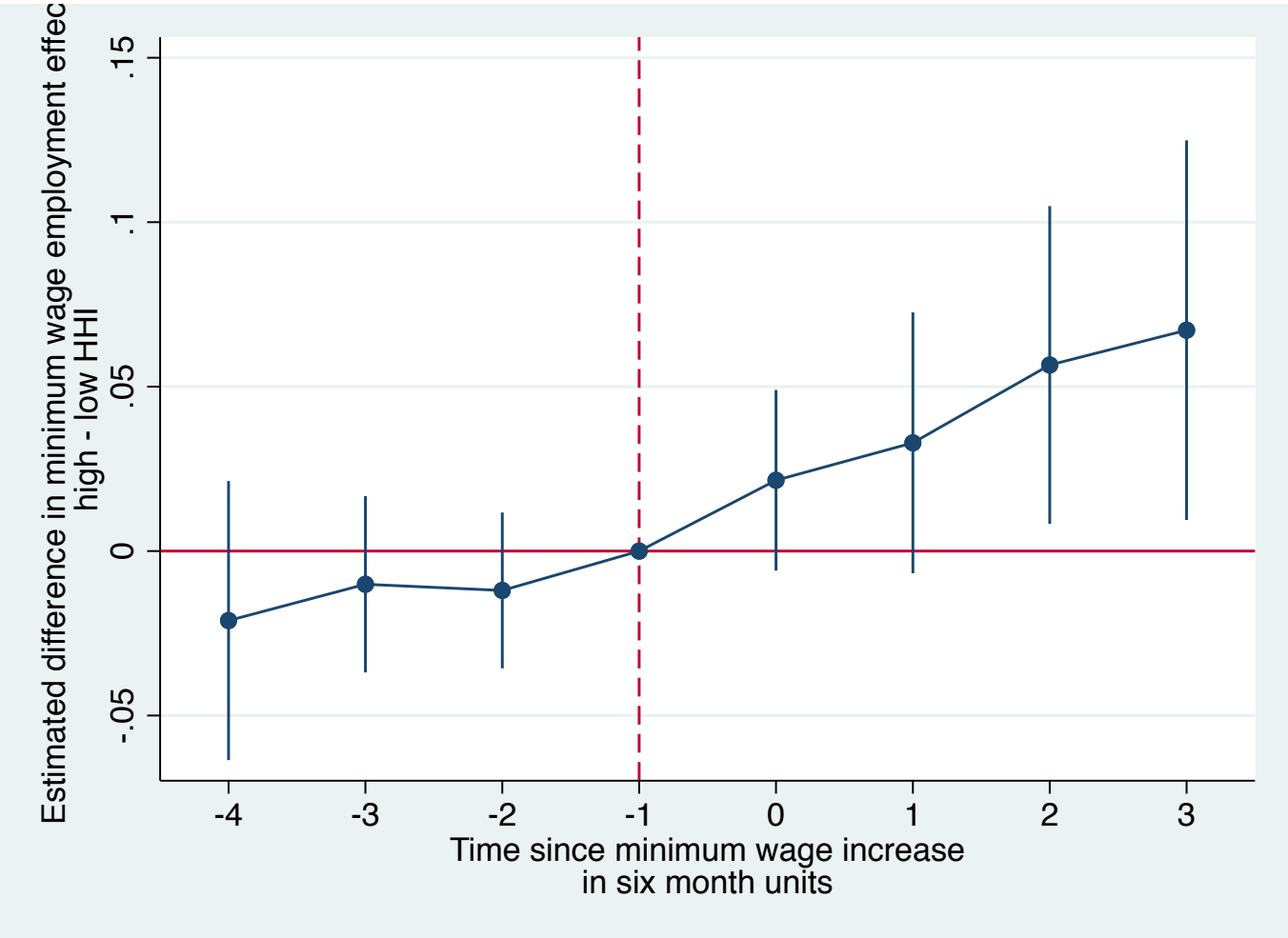

Figure A8. Estimated Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration in the Retail Sales Occupational Labor Market

Notes: The figure reports the event-study estimates of λ and ρ derived from the second event-study specification in Section 4.2.3 when defining high and low labor market concentration levels over the retail sales occupational labor market. Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). Estimates measure the evolution in the difference in log general merchandise store employment between eventually treated counties and control counties in retail sales labor markets with high concentration ($HHI \geq 0.25$) net of this difference in low concentration areas (relative to the difference in this difference in the six months before the minimum wage increased) after adjusting for model covariates. See text for further model details.

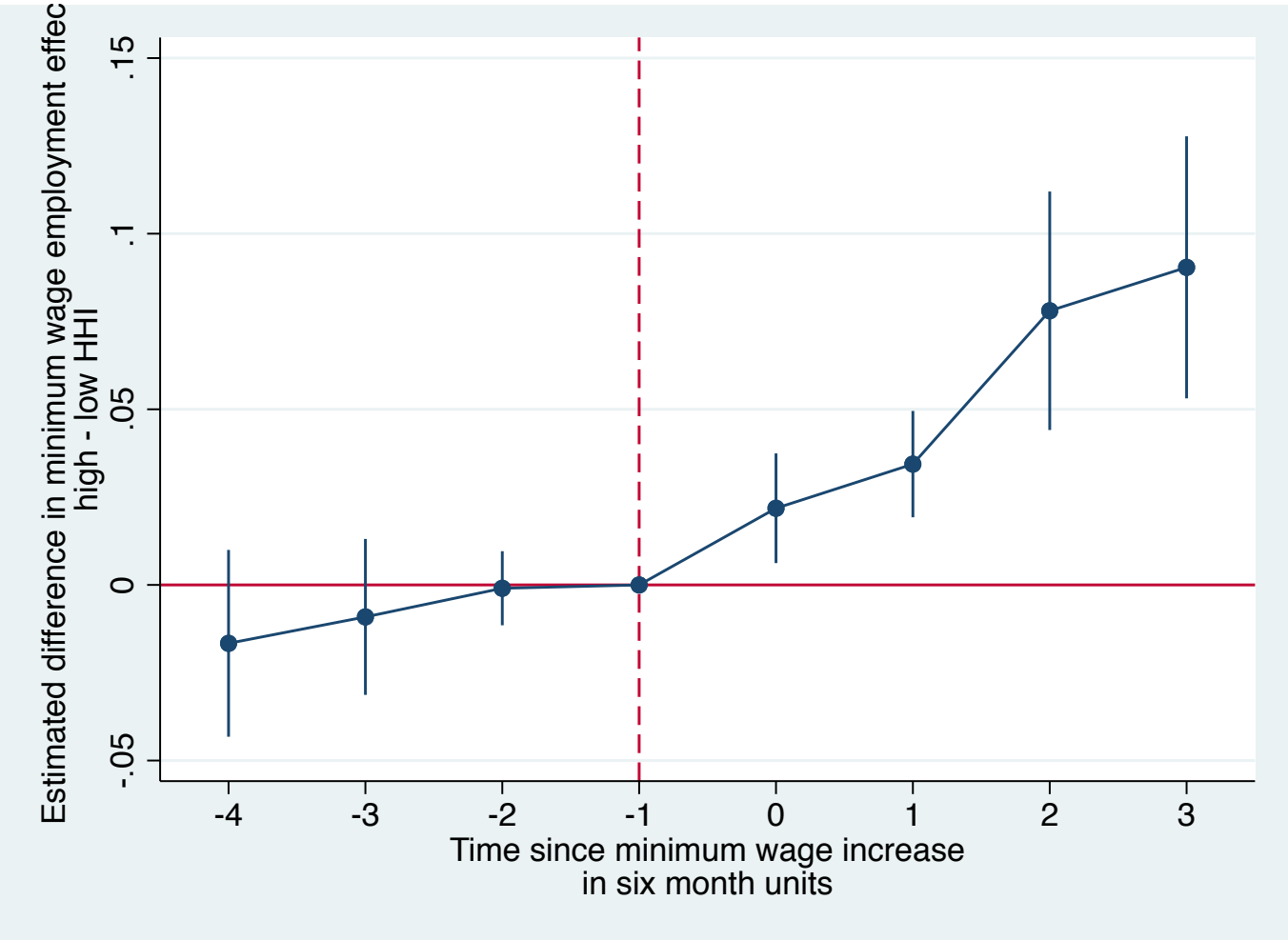

Figure A9. Alternative More Restrictive Control Group Estimates of Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration in the Cashiers Occupational Labor Market

Notes: The figure replicates Figure 10 when using the alternative more restrictive control group of locations that did not ever have a minimum wage increase during our sample period. See Figure 10 and the text for further details.

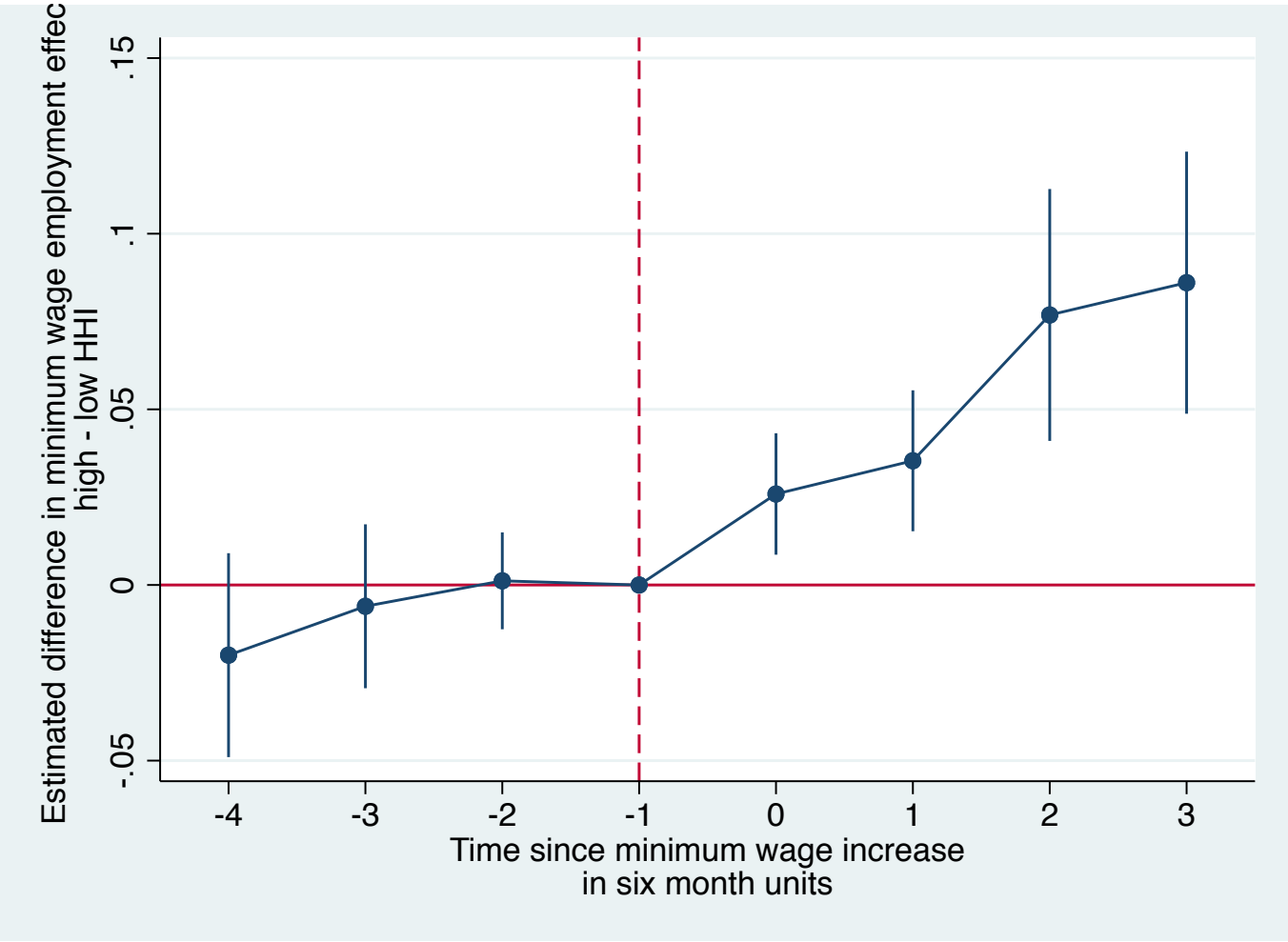

Figure A10. Alternative More Restrictive Control Group Estimates of Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration in the Stock Clerks Occupational Labor Market

Notes: The figure replicates Appendix Figure A5 when using the alternative more restrictive control group of locations that did not ever have a minimum wage increase during our sample period. See Appendix Figure A5 and the text for further details.

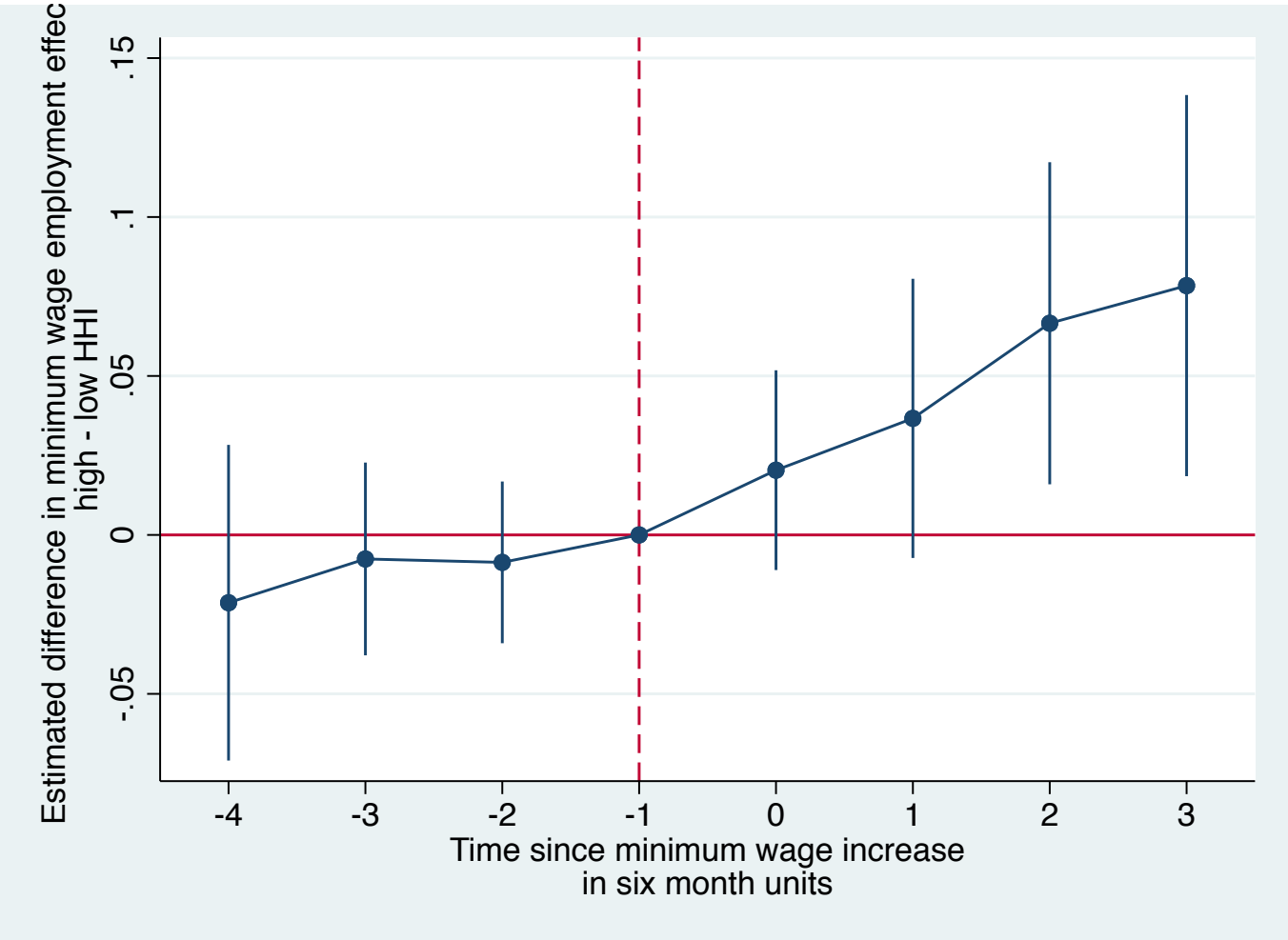

Figure A11. Alternative More Restrictive Control Group Estimates of Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration in the Retail Sales Occupational Labor Market

Notes: The figure replicates Appendix Figure A8 when using the alternative more restrictive control group of locations that did not ever have a minimum wage increase during our sample period. See Appendix Figure A8 and the text for further details.

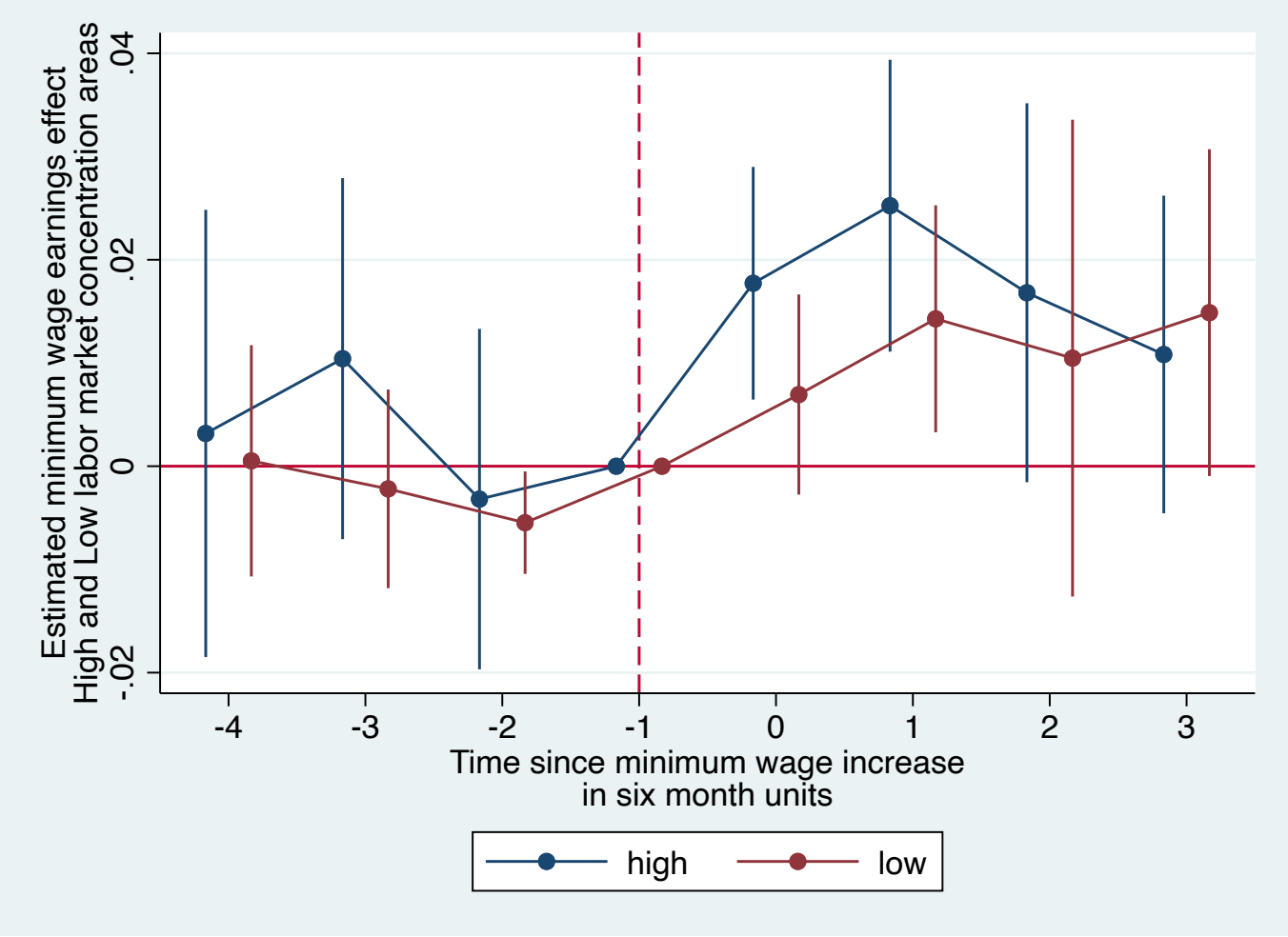

Figure A12. Event-study Estimate of Minimum Wage Earnings Effect in Low and High Concentration Cashier Occupational Labor Markets

Notes: The figure reports the event-study estimates of α and ρ derived from the first event-study specification in Section 4.2.3 when using the sample of locations where cashier occupational labor market concentration levels are low ($HHI < 0.25$) or high high ($HHI \geq 0.25$), respectively. Solid lines are 95% confidence intervals. The dependent variable is log of average monthly earnings in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). See text for further model details. There is no significant difference in the size of the post-event earnings effect across high and low concentration places (p-value of 0.192).

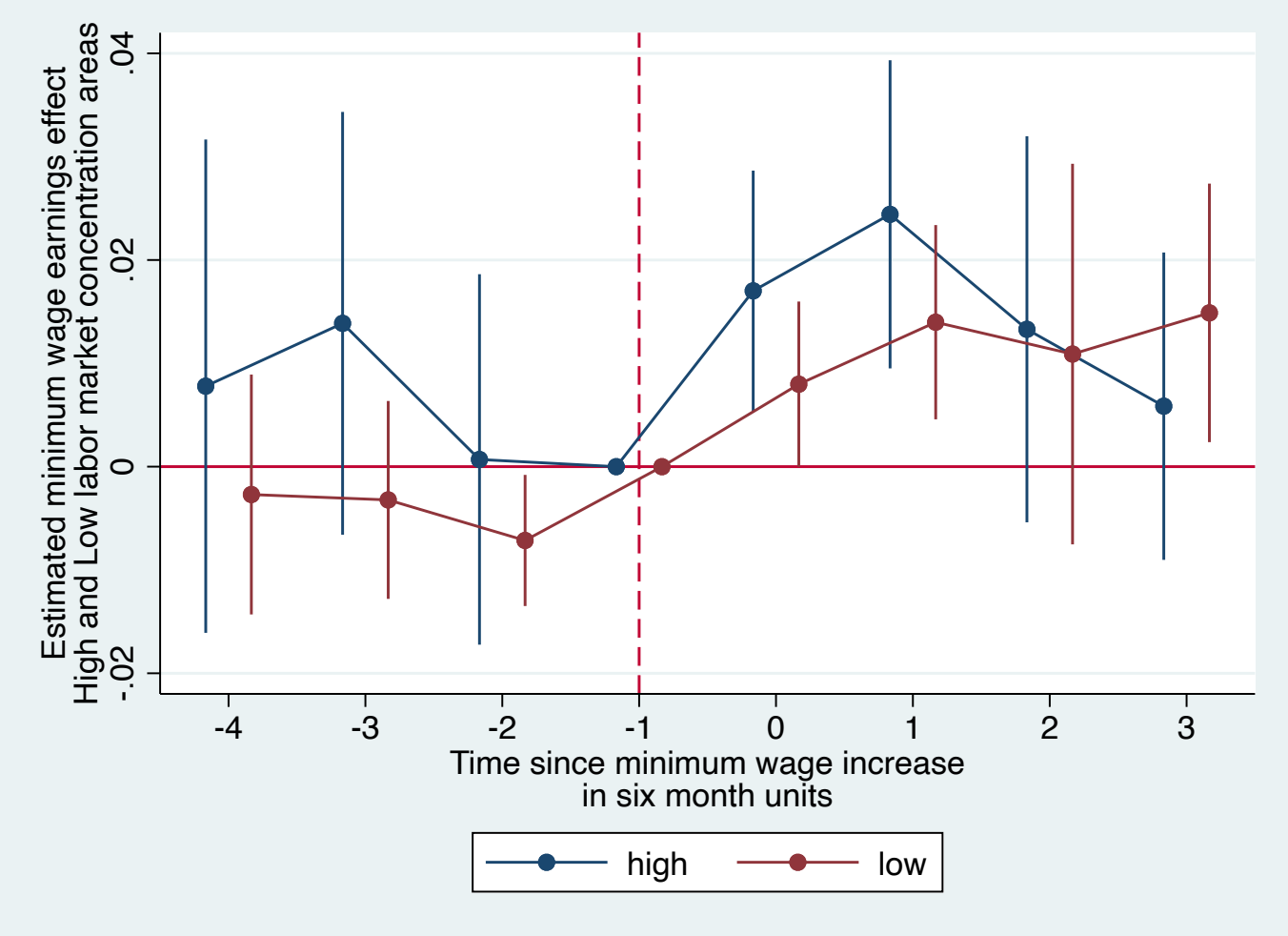

Figure A13. Event-study Estimate of Minimum Wage Earnings Effect in Low and High Concentration Stock Clerk Occupational Labor Markets

Notes: The figure reports the event-study estimates of α and ρ derived from the first event-study specification in Section 4.2.3 when using the sample of locations where stock clerk occupational labor market concentration levels are low ($HHI < 0.25$) or high high ($HHI \geq 0.25$), respectively. Solid lines are 95% confidence intervals. The dependent variable is log of average monthly earnings in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). See text for further model details. There is no significant difference in the size of the post-event earnings effect across high and low concentration places (p-value of 0.251).

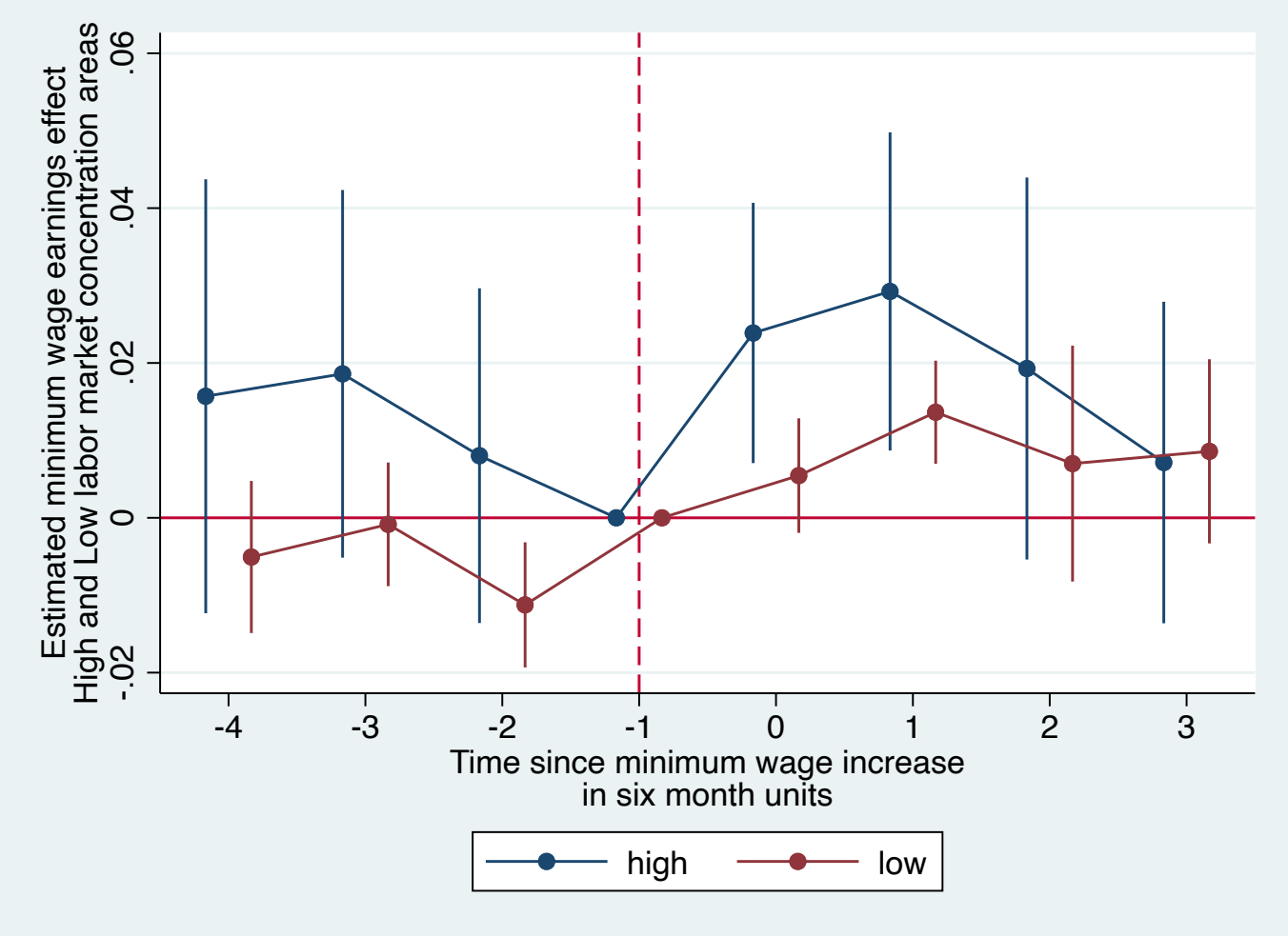

Figure A14. Event-study Estimate of Minimum Wage Earnings Effect in Low and High Concentration Retail Sales Occupational Labor Markets

Notes: The figure reports the event-study estimates of α and ρ derived from the first event-study specification in Section 4.2.3 when using the sample of locations where retail sales occupational labor market concentration levels are low ($HHI < 0.25$) or high high ($HHI \geq 0.25$), respectively. Solid lines are 95% confidence intervals. The dependent variable is log of average monthly earnings in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). See text for further model details. There is no significant difference in the size of the post-event earnings effect across high and low concentration places (p-value of 0.093).

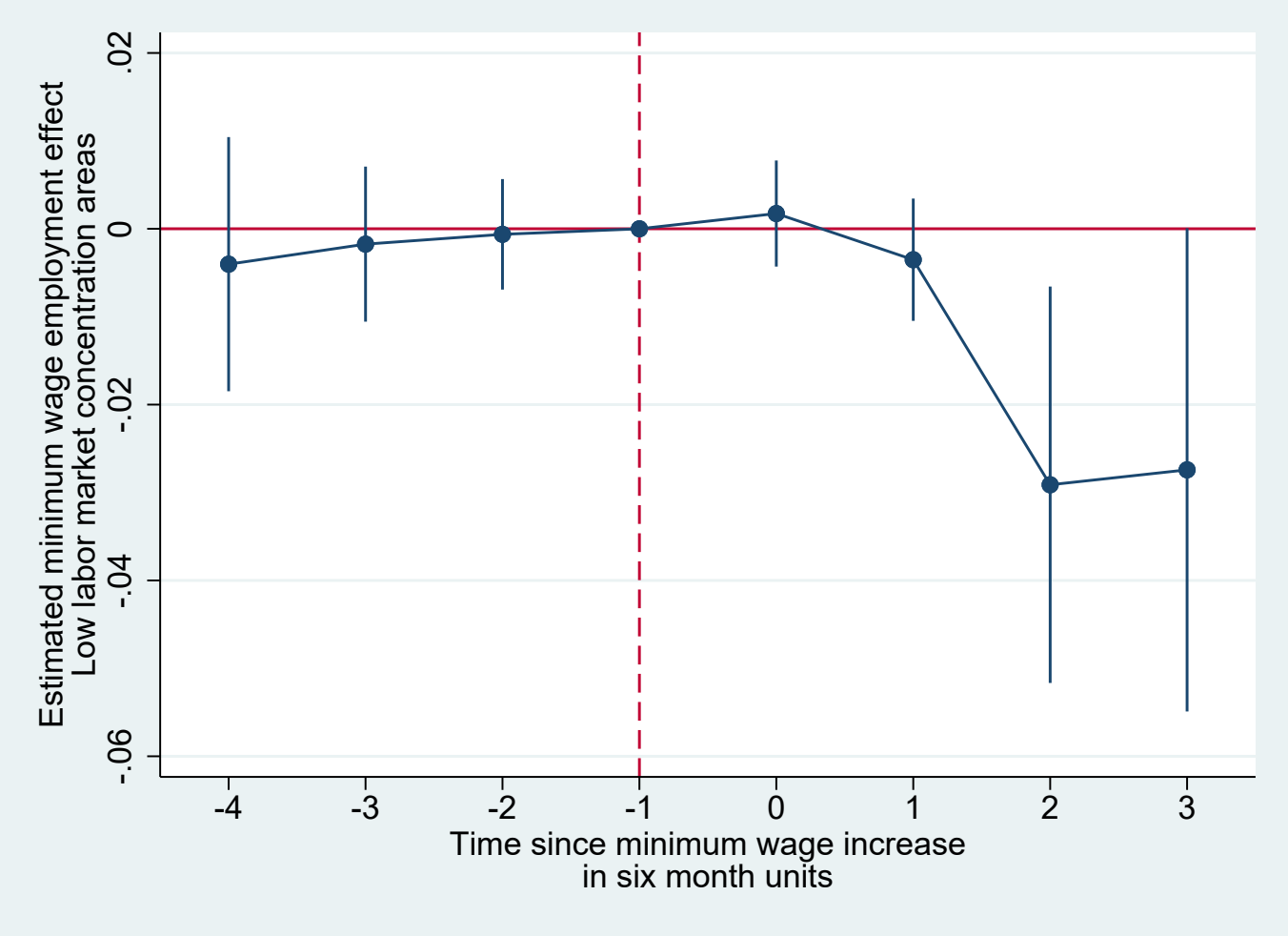

Figure A15. Stacked Event-study Estimate of Minimum Wage Employment Effect in Low Concentration Cashiers Occupational Labor Markets

Notes: The figure reports a stacked version of the event-study specification underlying Figure 8, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the first event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). This is done using the sample of locations where cashier occupational labor market concentration levels are low ($HHI < 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line).

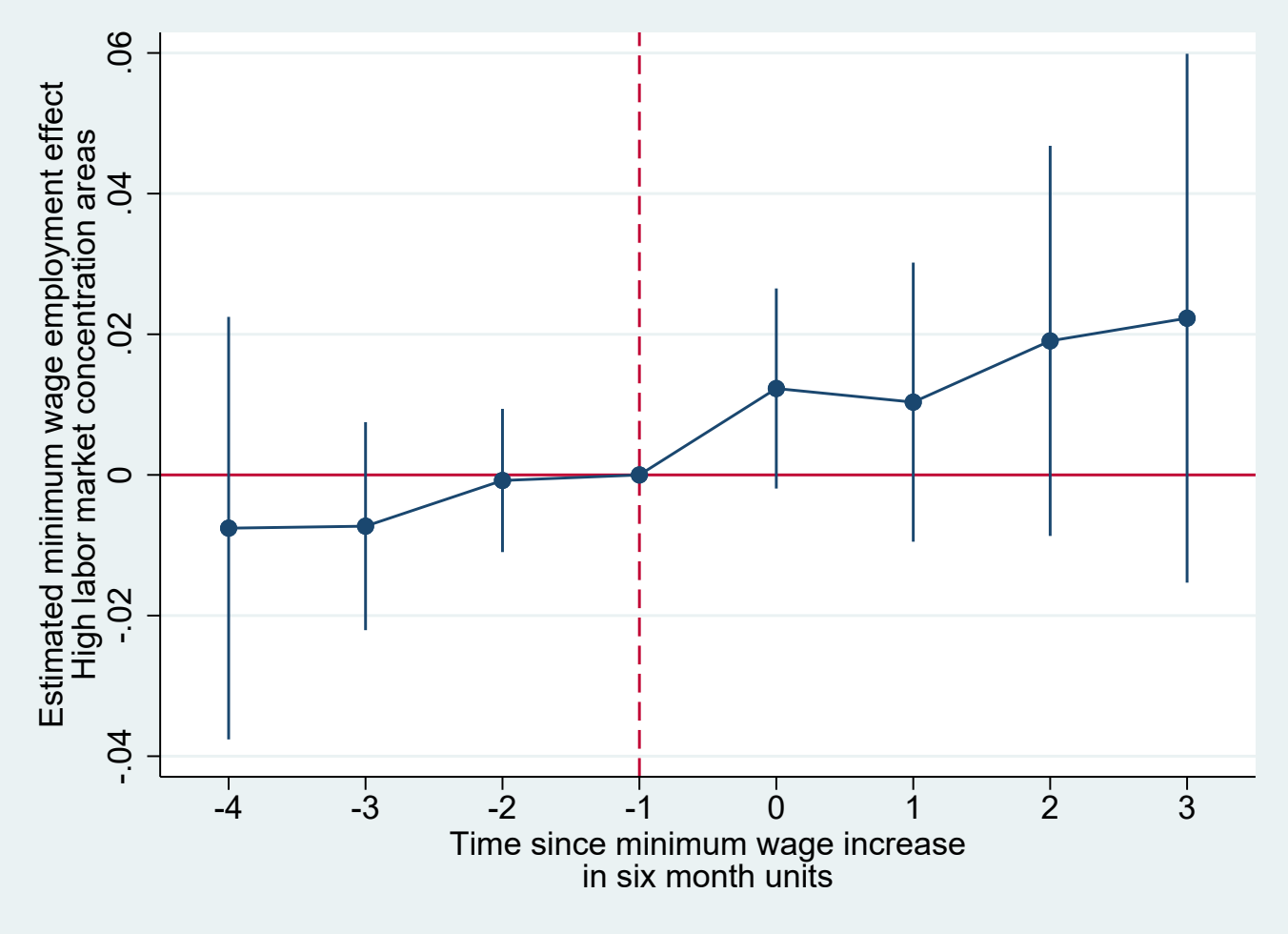

Figure A16. Stacked Event-study Estimate of Minimum Wage Employment Effect in High Concentration Cashiers Occupational Labor Markets

Notes: The figure reports a stacked version of the event-study specification underlying Figure 9, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the first event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). This is done using the sample of locations where cashier occupational labor market concentration levels are high ($HHI \geq 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line).

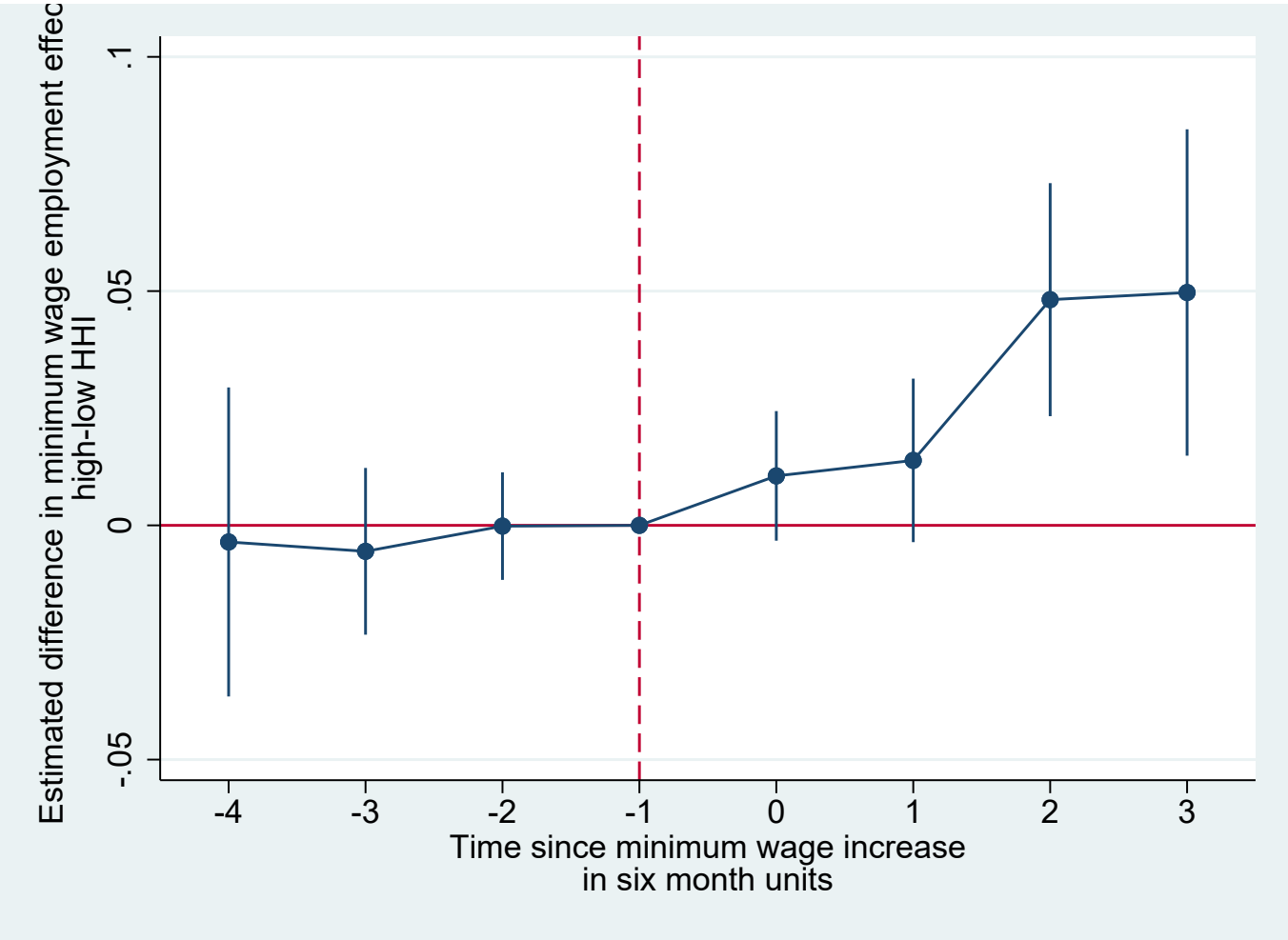

Figure A17. Estimated Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration in the Cashiers Occupational Labor Market (Stacked Event-Study Version)
Notes: The figure reports a stacked version of the event-study specification underlying Figure 10, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the second event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). Estimates measure the evolution in the difference in log general merchandise store employment between eventually treated counties and control counties in cashier labor markets with high concentration ($HHI \geq 0.25$) net of this difference in low concentration areas (relative to the difference in this difference in the six months before the minimum wage increased) after adjusting for model covariates.

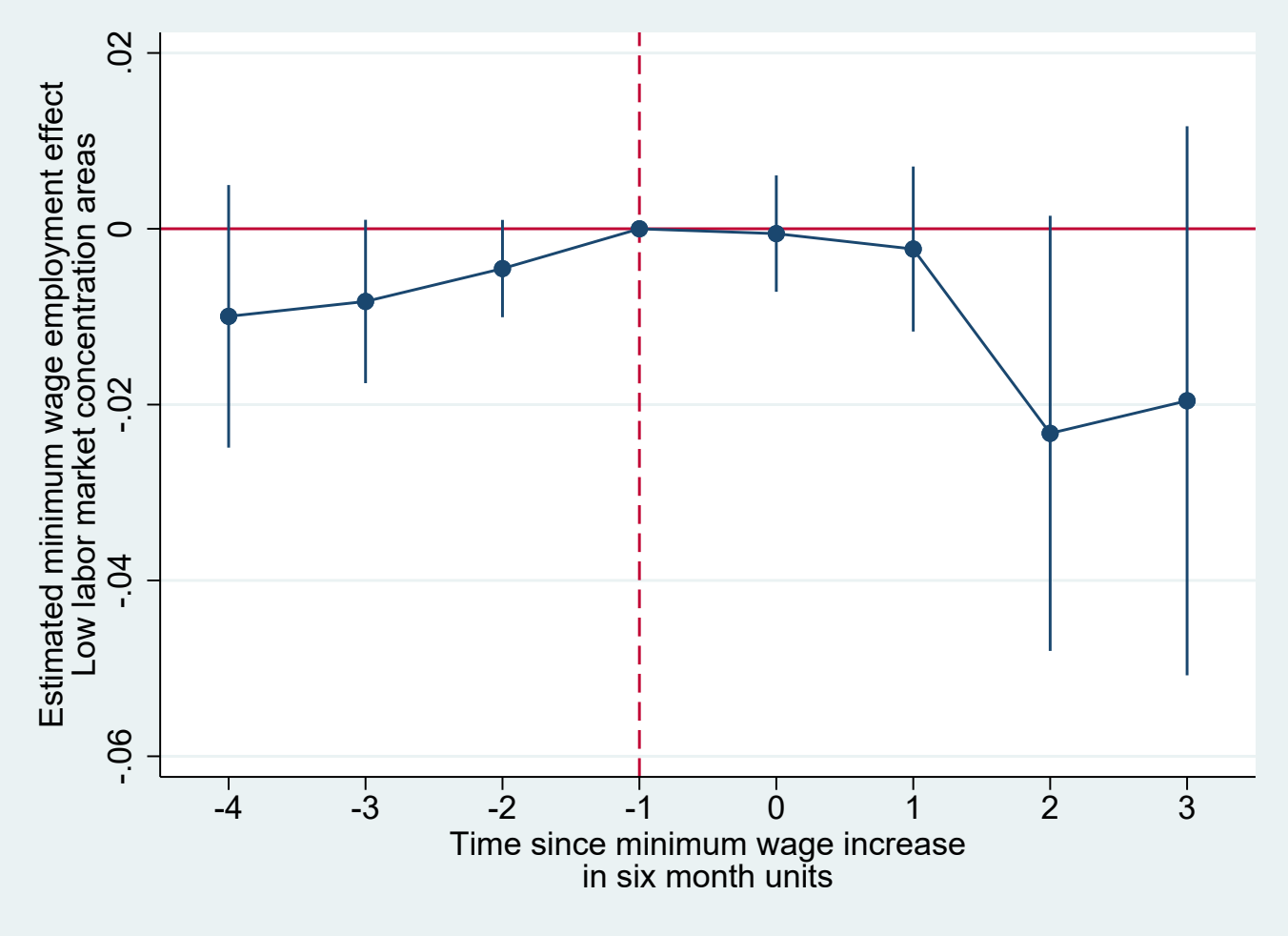

Figure A18. Stacked Event-study Estimate of Minimum Wage Employment Effect in Low Concentration Stock Clerk Occupational Labor Markets

Notes: The figure reports a stacked version of the event-study specification underlying Appendix Figure A3, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the first event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). This is done using the sample of locations where stock clerk occupational labor market concentration levels are low ($HHI < 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line).

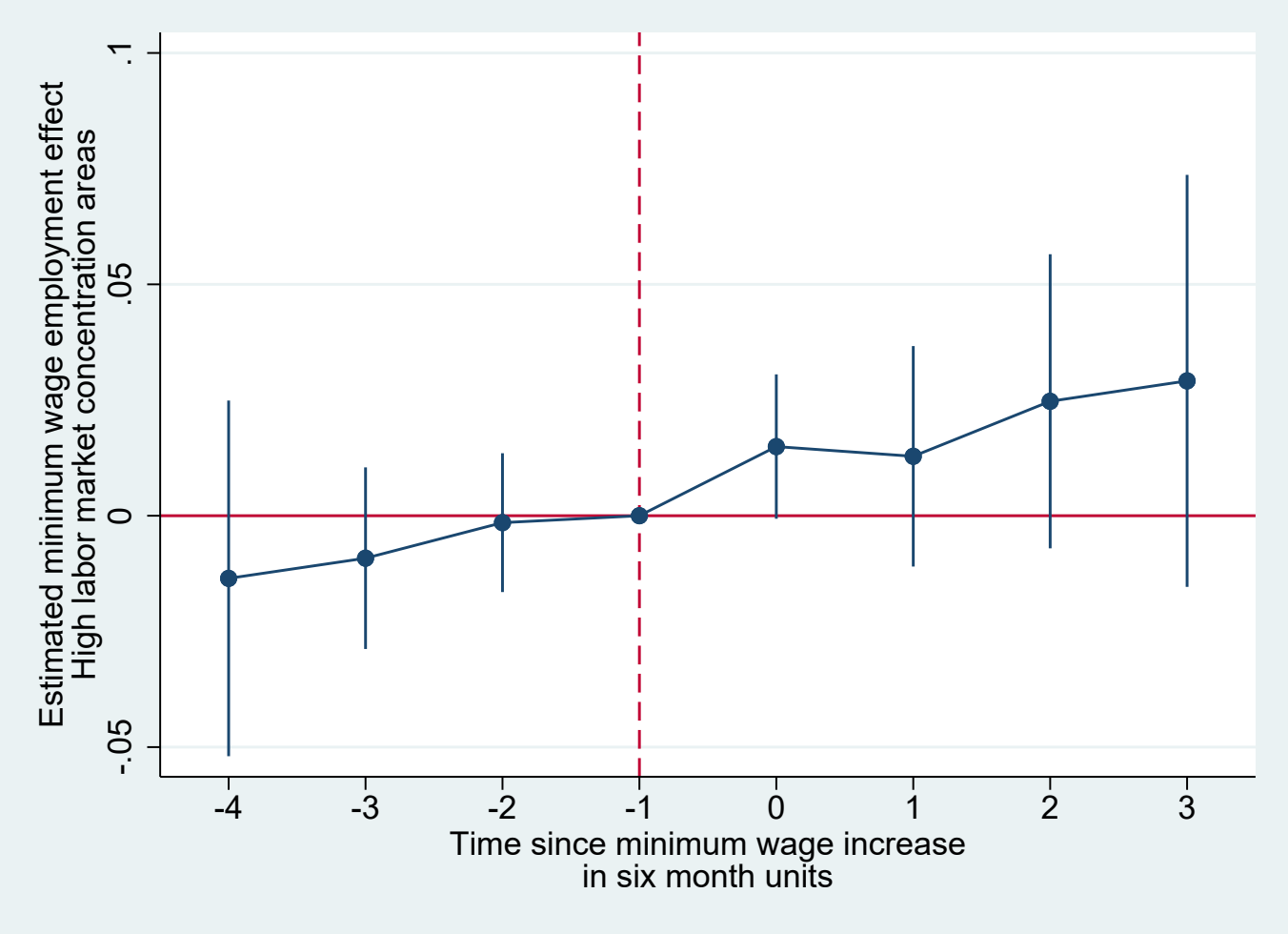

Figure A19. Stacked Event-study Estimate of Minimum Wage Employment Effect in High Concentration Stock Clerk Occupational Labor Markets

Notes: The figure reports a stacked version of the event-study specification underlying Appendix Figure A4, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the first event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). This is done using the sample of locations where stock clerk occupational labor market concentration levels are high ($HHI \geq 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line).

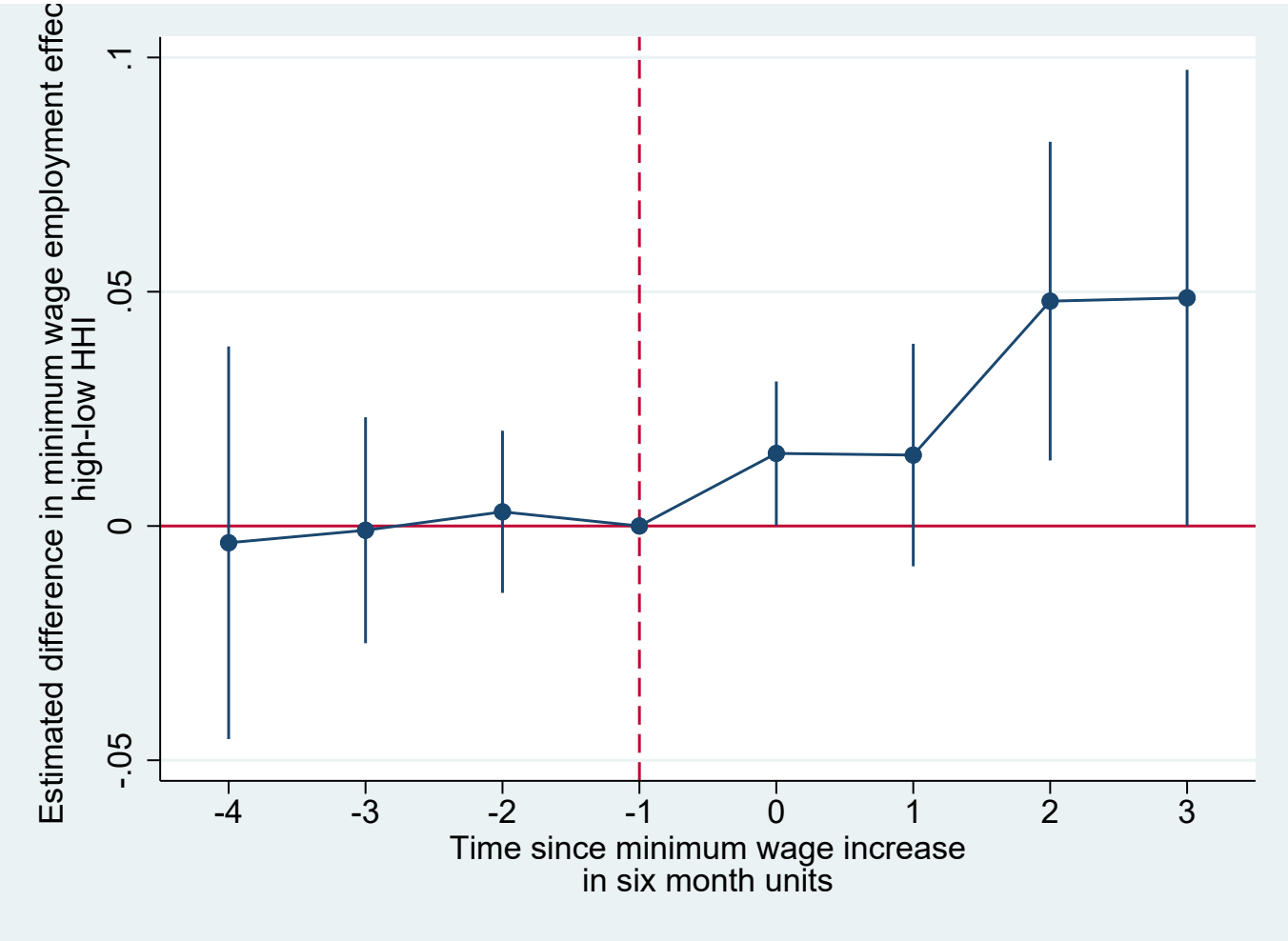

Figure A20. Estimated Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration in the Stock Clerk Occupational Labor Market (Stacked Event-Study Version)

Notes: The figure reports a stacked version of the event-study specification underlying Figure A5, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the second event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). Estimates measure the evolution in the difference in log general merchandise store employment between eventually treated counties and control counties in stock clerk labor markets with high concentration ($HHI \geq 0.25$) net of this difference in low concentration areas (relative to the difference in this difference in the six months before the minimum wage increased) after adjusting for model covariates.

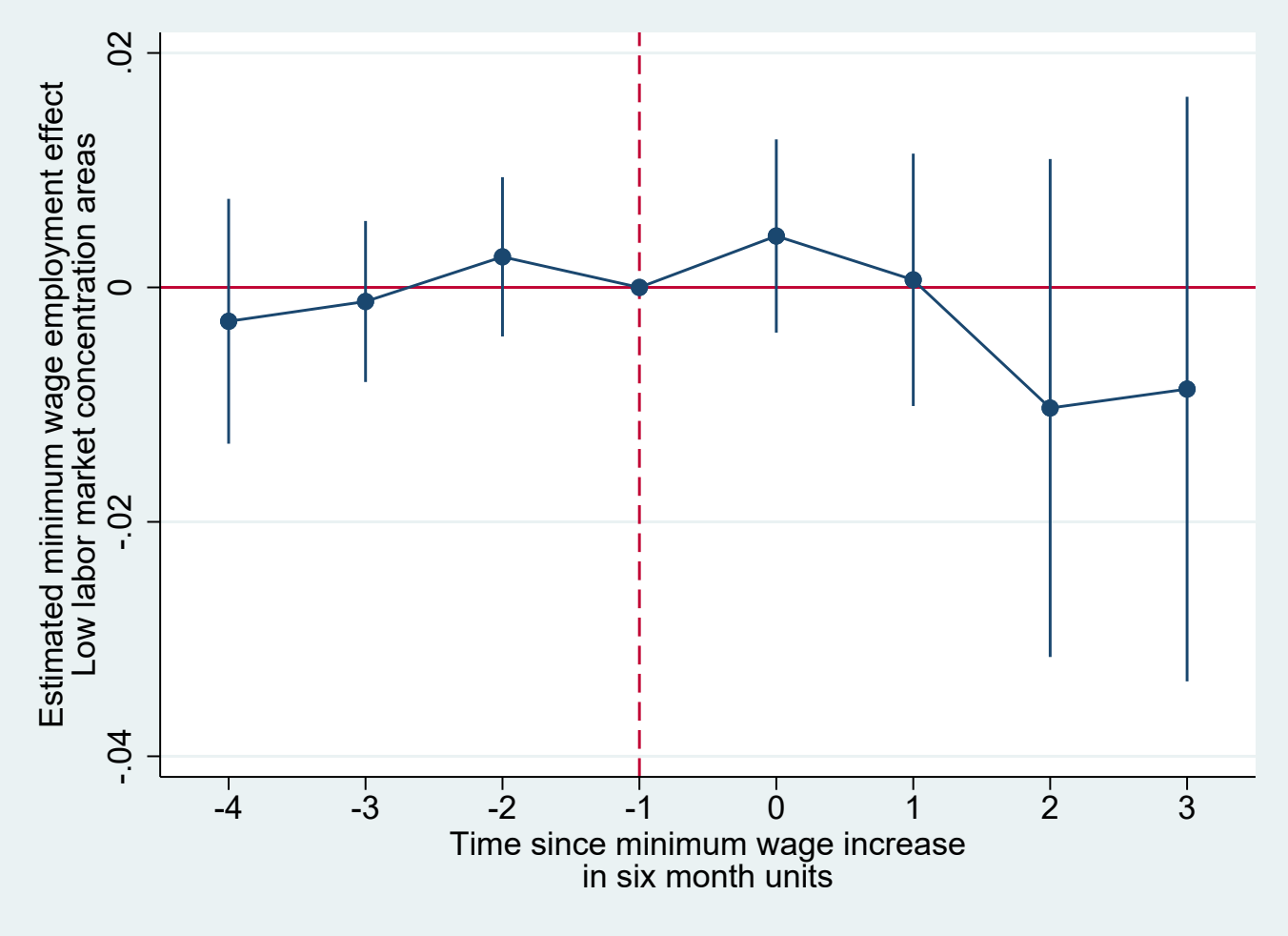

Figure A21. Stacked Event-study Estimate of Minimum Wage Employment Effect in Low Concentration Retail Sales Occupational Labor Markets

Notes: The figure reports a stacked version of the event-study specification underlying Appendix Figure A6, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the first event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). This is done using the sample of locations where retail sales occupational labor market concentration levels are low ($HHI < 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line).

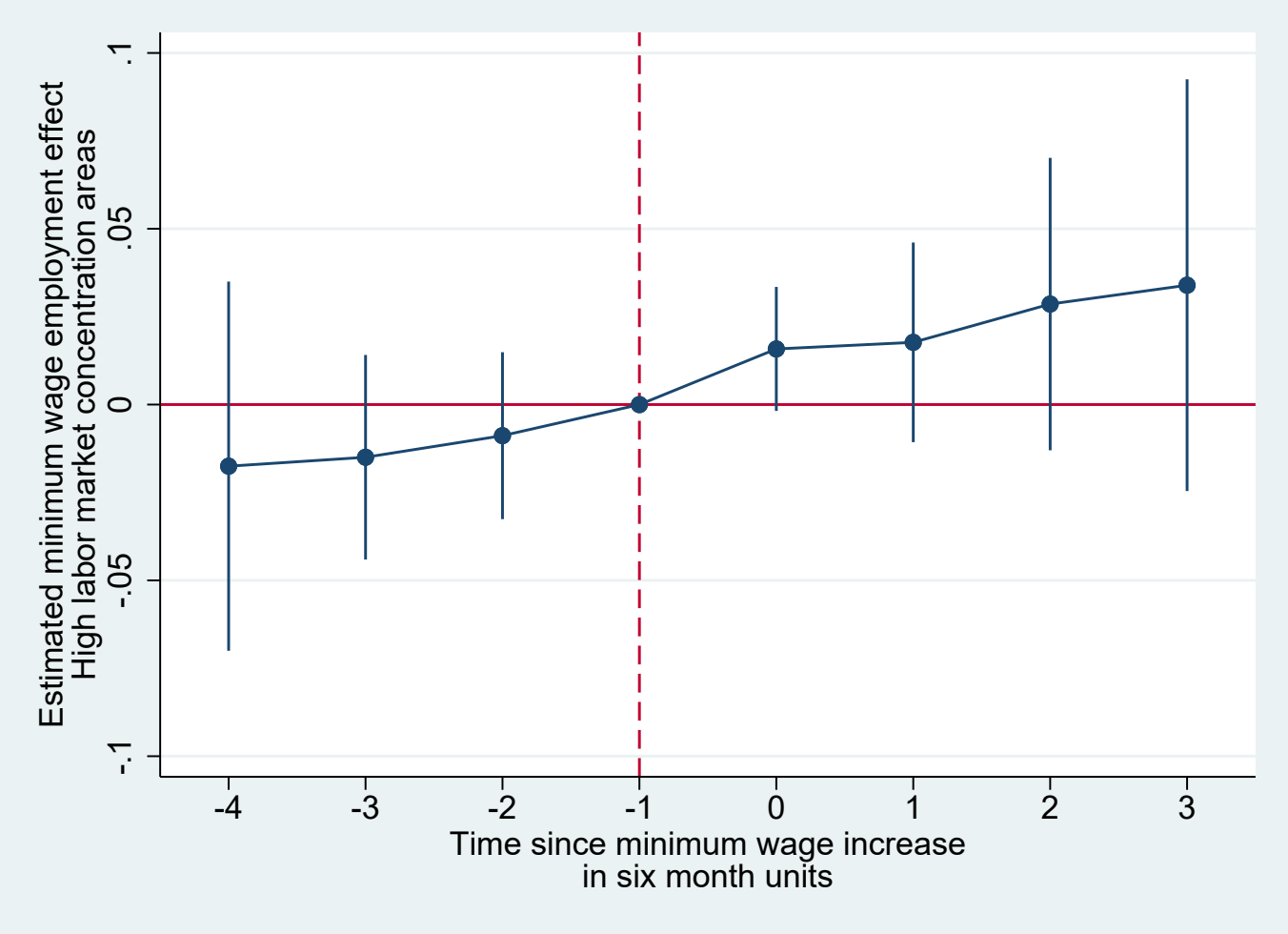

Figure A22. Stacked Event-study Estimate of Minimum Wage Employment Effect in High Concentration Retail Sales Occupational Labor Markets

Notes: The figure reports a stacked version of the event-study specification underlying Appendix Figure A7, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the first event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). This is done using the sample of locations where retail sales occupational labor market concentration levels are high ($HHI \geq 0.25$). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line).

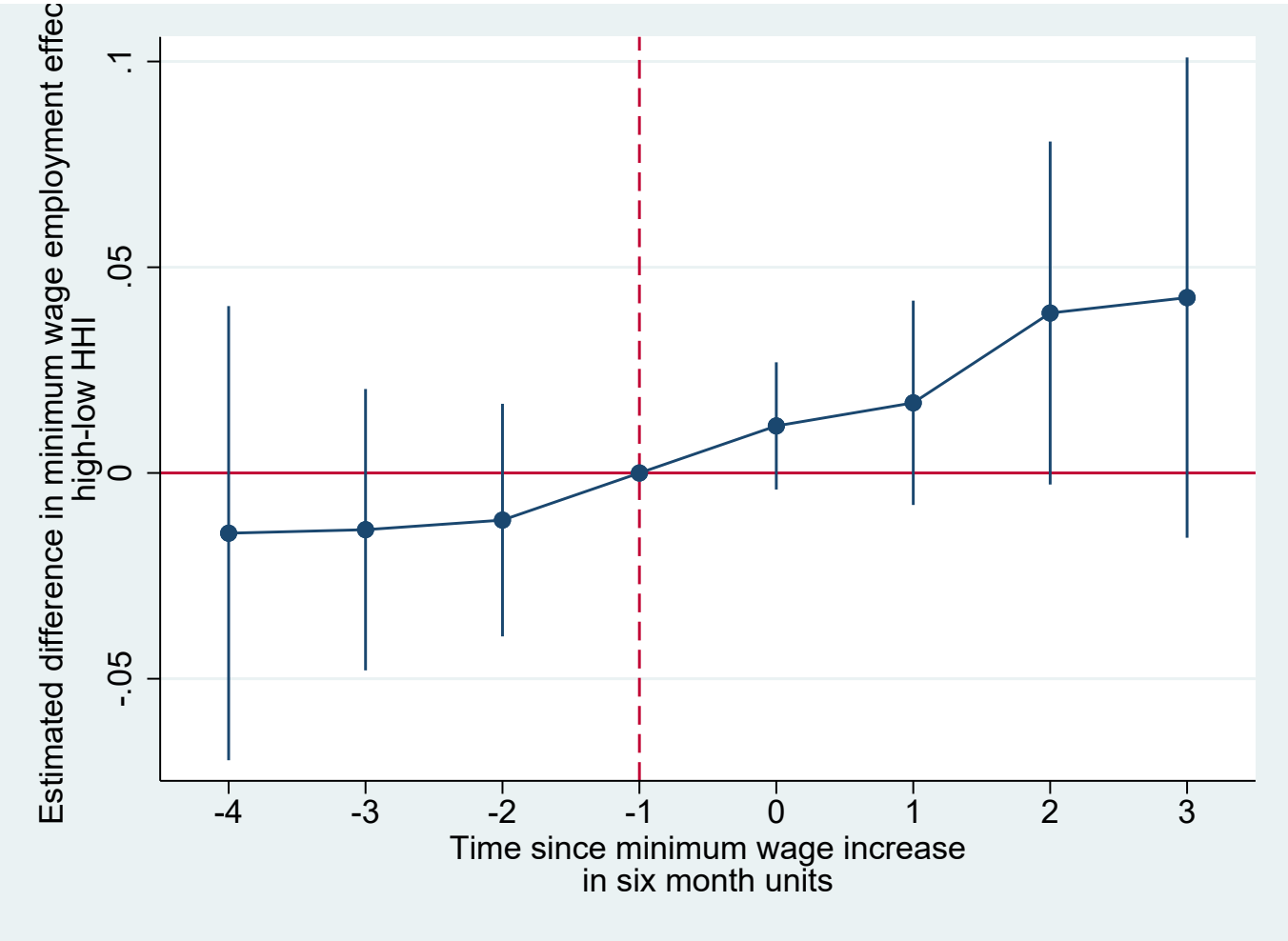

Figure A23. Estimated Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration in the Retail Sales Occupational Labor Market (Stacked Event-Study Version)

Notes: The figure reports a stacked version of the event-study specification underlying Figure A8, with modifications made here to address negative weighting concerns, following Cengiz et al. (2019). Specifically, for each of our minimum wage events, we construct an event-specific data set that includes the counties treated by that particular large minimum wage increase (included only for the periods within the ± 8 quarter event window around the event's onset) and any counties without a large minimum wage increase happening during the ± 8 quarter event window around the event's onset (included only for the periods within this same time span as well). Each of these event-specific data sets are then stacked on top of each other to form one stacked data set. On this stacked data set we run the second event-study specification in Section 4.2.3 with the modification that the calendar time and county fixed effects are interacted with indicators for the event-specific data set from which the observation comes (with standard errors clustered at the state by event-specific-data set level). Solid lines are 95% confidence intervals. The dependent variable is log employment in the general merchandise store industry. All effects are relative to a $t-1$ time window of 6 months prior to the minimum wage increase (with this reference time period indicated by the dashed vertical line). Estimates measure the evolution in the difference in log general merchandise store employment between eventually treated counties and control counties in retail sales labor markets with high concentration ($HHI \geq 0.25$) net of this difference in low concentration areas (relative to the difference in this difference in the six months before the minimum wage increased) after adjusting for model covariates.

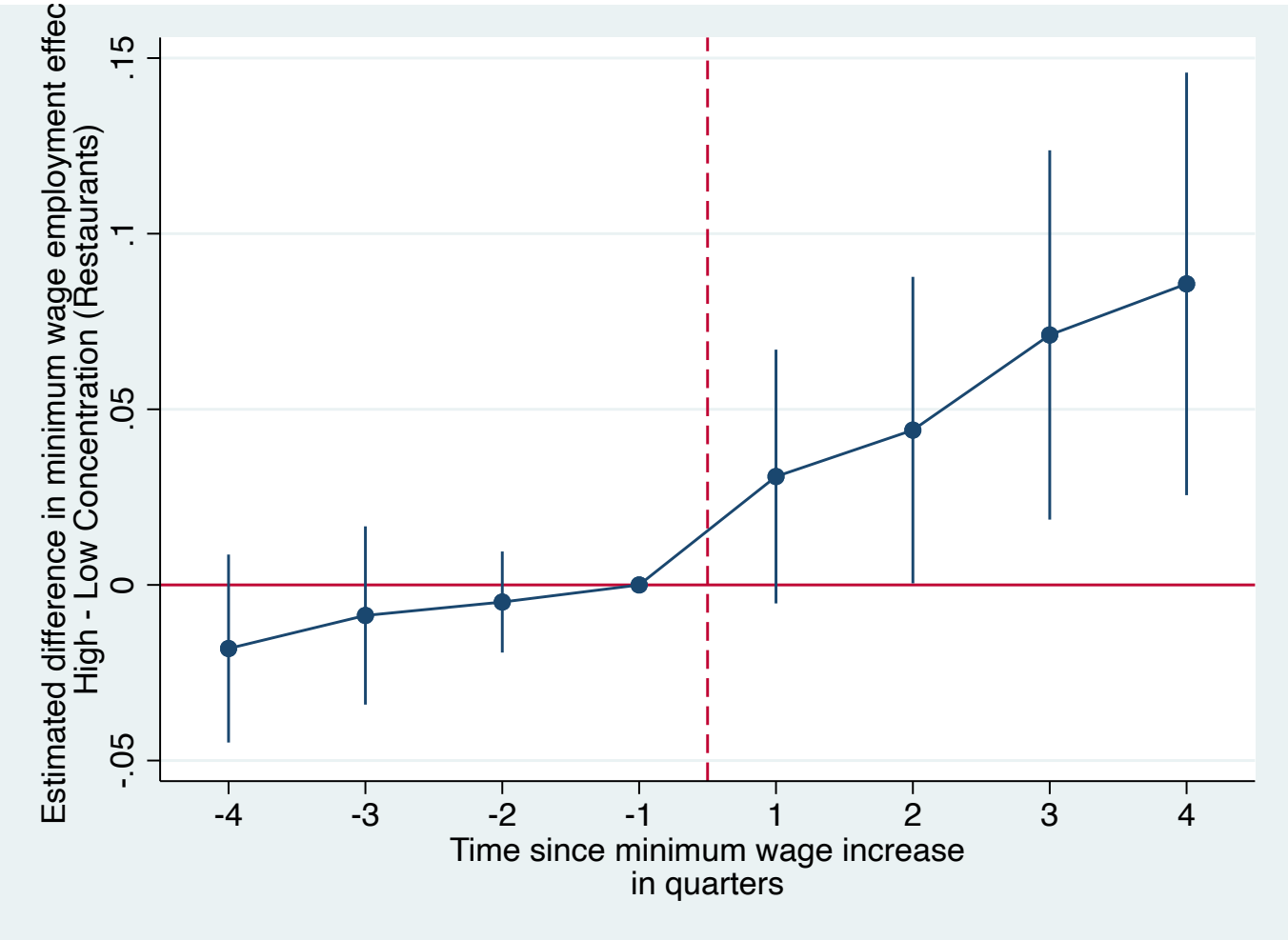

Figure A24. Estimates of Difference in Minimum Wage Employment Effect in Areas with High vs. Low Concentration Areas (using no. of establishments proxy)

Notes: The figure presents an equivalent figure to Figure 10 and similar figures in the Appendix with the key difference that here we use the average number of general merchandise establishments in a county to separate high from low (above or below median) labor market concentration counties. The coefficients are event-study estimates of λ and σ derived from the second event-study specification in Section 4.2.3. See Figure 10 and the text for further details.

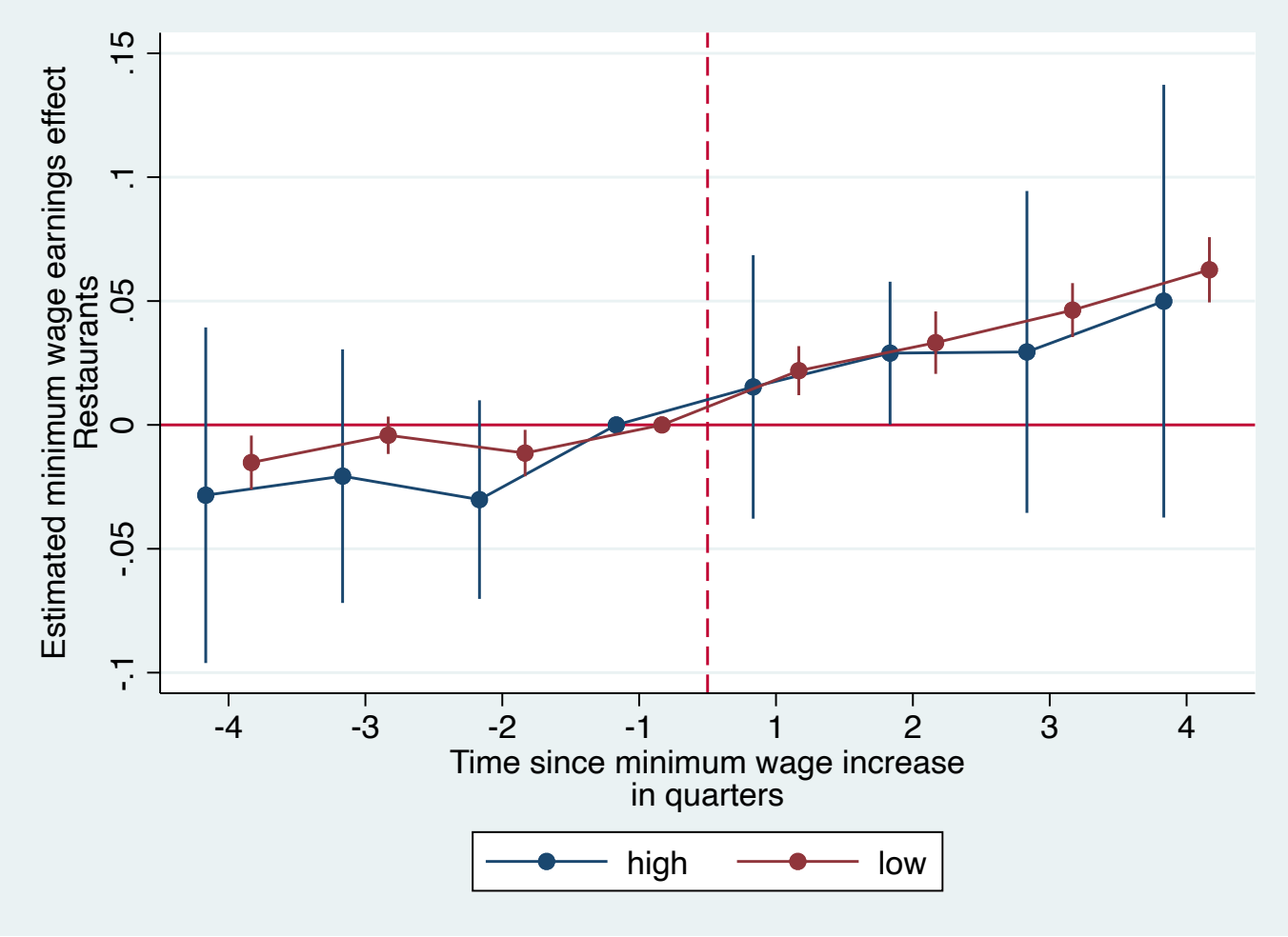

Figure A25. Restaurant Minimum Wage Earnings Effect in High and Low Concentration Areas (using no. of establishments proxy)

Notes: The figure presents event-study estimates of the earnings effect of the minimum wage in the "fast-food" industry in low (red) and high (blue) labor market concentration counties (as defined in the notes of Figures 11 and 12). We use the same specification as in those figures but here the outcome is the log of county-quarter limited-service restaurant average monthly earnings. In the figure we stagger the two series to either side of the relevant time period so they do not obscure each other. There is no significant earnings effect difference in the post-event period in the high vs. low concentration areas (p-value of 0.610).

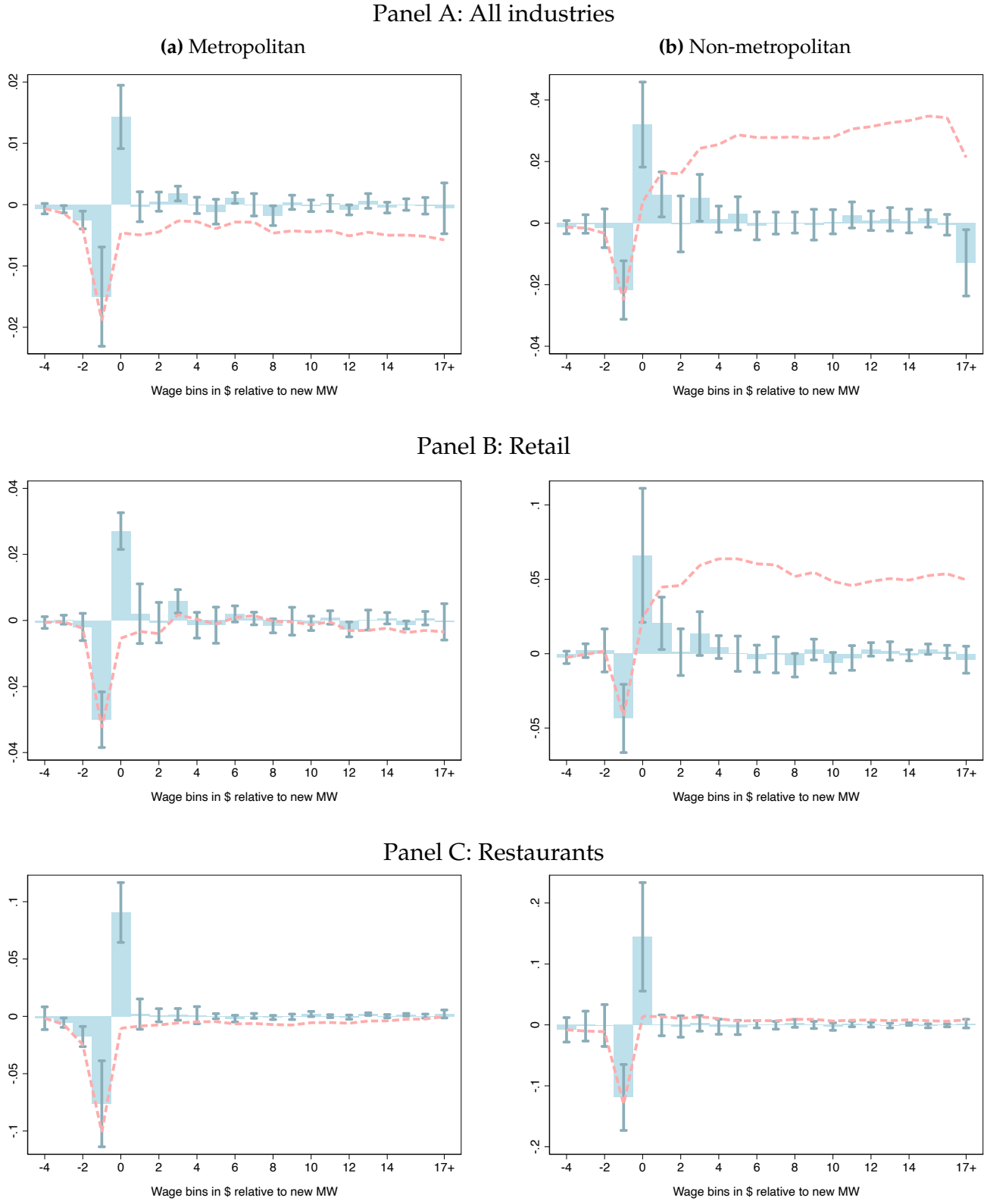

Figure A26. Impact of minimum wage on the wage distribution, by metropolitan status

Notes: The Figure shows the bunching estimates of the impact of the minimum wage from Cengiz et al. (2019) for both metropolitan and non-metropolitan labor markets. The dashed red line shows the running sum of employment changes up to the wage bin it corresponds to. The blue bars show for each dollar bin (relative to the minimum wage) the estimated average employment changes in that bin during the five years post treatment relative to the total employment in the state one year before the treatment. The error bars show the 95% confidence interval using standard errors that are clustered at the state level. See Section 4.2.5 and the discussion of Figure 2 in Cengiz et al. (2019) for further details as we follow the methodology they outline using their replication files.

A.3 Price effects of the minimum wage and labor market concentration in the general merchandise industry

In this section, we reproduce Table 2, but using the consumer price index instead of employment as an outcome.

To measure prices, we use the Bureau of Labor Statistics Consumer Price Index (CPI) at the CBSA level, which is available for 31 CBSAs. Full data over the time period studied were only available for 16 CBSAs. We allocate counties to their CBSA (with the CBSA as defined in the BLS CPI data). The CBSAs appearing in the BLS reports were from a mixture of differing iterations of the Census's statistical area delineation process, thus manual adjustment was necessary to accommodate the different versions of CBSAs available in the data.

We merge local prices by county and quarter, excluding any multi-state CBSAs. Since most of our minimum wage changes are at the state level, allowing for the CPI to be the same across states (for CBSAs that cross state borders) would bias the effect of the minimum wage toward zero (hence the exclusion). Because there are only ten different CBSAs in the analysis sample, the power of the analysis is limited.

We investigate the impact of the minimum wage on the "All Items" CPI (Appendix Table A19) and on the Commodities CPI (Appendix Table A20), which is closer to capturing prices in general merchandise. For both CPI measures, the impact of the minimum wage and its interaction with concentration are statistically insignificant. In the case of the commodities CPI, the coefficient on the interaction between the minimum wage and average HHI is smaller than in the case of the "All Items" CPI.

Overall, the effect of the minimum wage on prices is not statistically significantly different across counties with different labor market concentration, but the low power of our analysis prevents us from reaching a firm conclusion.

Table A19. Minimum Wage Effect on All Items CPI Subcategory by Concentration in Occupational Labor Market - No Multistate Data

	Dependent Variable: Log All Items CPI Subcategory					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	-0.0320	-0.0185	-0.0380	-0.0191	-0.0410	-0.0175
	(0.0298)	(0.0247)	(0.0317)	(0.0248)	(0.0367)	(0.0241)
Log Min Wage * Avg HHI	0.141		0.442		0.181	
	(0.216)		(0.584)		(0.268)	
Log Min Wage × High HHI		-0.00978		—-		-0.0151
		(0.00594)		(—-)		(0.0100)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
Multistate CBSA Included	N	N	N	N	N	N
adj. R^2	0.992	0.992	0.992	0.992	0.992	0.992
N	2069	2069	2069	2069	2069	2069

Notes: The table replicates Table 2 with the log of the CBSA-quarter CPI "All Items" subcategory price index as the outcome. Note that every county classified as belonging to the same CBSA is coded as having the same value for the outcome variable. Counties classified under a CBSA that spans multiple states have been dropped from the regression. See Table 2 notes for further details. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A20. Minimum Wage Effect on Commodities CPI Subcategory by Concentration in Occupational Labor Market - No Multistate Data

	Dependent Variable: Log Commodities CPI Subcategory					
	Stock Clerks		Retail Sales		Cashiers	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Min Wage	-0.0169	-0.0113	-0.0233	-0.0121	-0.0186	-0.00954
	(0.0458)	(0.0461)	(0.0456)	(0.0462)	(0.0484)	(0.0454)
Log Min Wage * Avg HHI	0.0526		0.261		0.0538	
	(0.166)		(0.437)		(0.214)	
Log Min Wage × High HHI		-0.0144		—-		-0.0240
		(0.00983)		(—-)		(0.0147)
County Fixed Effects	Y	Y	Y	Y	Y	Y
Cen. Div. Period Fixed Effects	Y	Y	Y	Y	Y	Y
State-Specific Time Trends	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y
Multistate CBSA Included	N	N	N	N	N	N
adj. R^2	0.977	0.977	0.977	0.977	0.977	0.977
N	2069	2069	2069	2069	2069	2069

Notes: The table replicates Table 2 with the log of the CBSA-quarter CPI "Commodities" subcategory price index as the outcome. Note that every county classified as belonging to the same CBSA is coded as having the same value for the outcome variable. Counties classified under a CBSA that spans multiple states have been dropped from the regression. See Table 2 notes for further details. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$