Appendix: Supplemental Analysis
(FOR ONLINE PUBLICATION)

This Appendix provides additional results referenced in the main text of Kovak and Morrow (2023) "The Distributional Impact of the Canada-U.S. Free Trade Agreement."

Table A1—: Effects of Tariff Cuts on Years Worked, by Initial Income

	(1) Total	(2) Initial Firm	(3) Initial Ind.	(4) Manuf.	(5) Constr.	(6) Mining	(7) Agric.	(8) Services	(9) Unknown
Panel A: Low-Income (n=27,902)									
$-\Delta \ln(1+\tau_j^{\text{CAN}})$	-2.351***	-5.834**	-2.182	0.866	1.110	0.345*	-0.734	4.015***	0.0641
	(0.803)	(2.808)	(1.508)	(2.109)	(0.698)	(0.202)	(0.496)	(1.422)	(0.0462)
$-\Delta \ln(1+\tau_j^{\text{US}})$	-0.596	4.887	7.261***	-8.287***	0.0845	-0.254	-0.291	-3.919*	-0.0781
	(1.787)	(3.991)	(2.578)	(2.590)	(1.271)	(0.300)	(0.950)	(2.169)	(0.0604)
R-squared	0.091	0.134	0.056	0.051	0.046	0.019	0.027	0.066	0.006
Panel B: Middle-Income (n=27,902)									
$-\Delta \ln(1+\tau_j^{\text{CAN}})$	2.115*	-2.142	-2.097	4.023	1.221	0.524	-0.673*	1.267	-0.00909
	(1.156)	(5.198)	(1.726)	(3.696)	(0.824)	(0.362)	(0.401)	(1.300)	(0.0322)
$-\Delta \ln(1+\tau_j^{\text{US}})$	-5.361**	-0.976	4.208	-6.231	0.698	-0.337	-1.023	-1.703	0.00188
	(2.275)	(8.274)	(4.528)	(6.153)	(1.726)	(0.568)	(0.731)	(2.998)	(0.0779)
R-squared	0.053	0.078	0.030	0.040	0.028	0.025	0.018	0.049	0.005
Panel C: High-Income (n=27,901)									
$-\Delta \ln(1+\tau_j^{\text{CAN}})$	4.409***	0.448	-5.150**	8.765***	1.508	0.567	-0.182	-1.640	0.0920
	(1.414)	(4.649)	(2.129)	(2.912)	(1.004)	(0.853)	(0.285)	(2.394)	(0.0699)
$-\Delta \ln(1+\tau_j^{\text{US}})$	-4.159	16.68	-6.198	-9.408	0.699	-0.847	-0.892**	-4.165	-0.0264
	(3.009)	(12.15)	(6.297)	(9.316)	(2.023)	(0.903)	(0.377)	(4.635)	(0.0898)
R-squared	0.083	0.108	0.055	0.046	0.020	0.039	0.011	0.049	0.005

Note: Dependent variable is the number of years worked (with nonzero earnings) during 1989-2004. The independent variables of interest are the 1988-1998 tariff cuts facing U.S. exports to Canada ($-\Delta \ln(1+\tau_j^{\text{CAN}})$) or facing Canadian exports to the U.S. ($-\Delta \ln(1+\tau_j^{\text{US}})$) in the worker's initial industry. A positive (negative) coefficient means that larger tariff cuts in the worker's initial industry lead to increased (decreased) years worked. Column (1) examines total years worked, (2) years worked at the initial firm, (3) at firms other than the initial firm, but in the same initial 4-digit industry, (4) in manufacturing industries (NAICS=3xxx) other than the initial industry, (5) in construction (NAICS=22xx,23xx), (6) in mining (NAICS=21xx), (7) in agriculture (NAICS=1xxx), (8) in services (NAICS≥4xxx), or (9) in a firm with unknown industry code. Each worker-year is assigned to only one category in columns (2) through (9) based on the primary (highest-earning) job, so the coefficients in columns (2) through (9) sum to the overall effect in column (1). The effect on years non-employed equals the estimate in column (1) times negative one. All specifications include extensive worker, initial firm, and initial industry controls, described in Kovak and Morrow (2022). Standard errors clustered by 4-digit NAICS industry. *** p<0.01, ** p<0.05, * p<0.1.

Table A2—: Effects of Tariff Cuts on Cumulative Earnings, by Initial Income

	(1) Total	(2) Initial Firm	(3) Initial Ind.	(4) Manuf.	(5) Constr.	(6) Mining	(7) Agric.	(8) Services	(9) Unknown
Panel A: Low-Income (n=27,902)									
$-\Delta \ln(1+\tau_j^{\text{CAN}})$	-1.445	-9.137*	-3.615	3.365	3.177*	1.033	-1.104	4.706	x
	(6.915)	(5.414)	(3.114)	(5.392)	(1.615)	(0.693)	(0.742)	(4.005)	x
$-\Delta \ln(1+\tau_j^{\text{US}})$	18.15	8.572	4.615	-5.216	2.820	-0.296	-0.618	7.640	x
	(12.40)	(9.084)	(4.895)	(8.622)	(2.494)	(1.351)	(1.339)	(8.428)	x
R-squared	0.152	0.043	0.017	0.041	0.030	0.017	0.016	0.131	x
Panel B: Middle-Income (n=27,902)									
$-\Delta \ln(1+\tau_j^{\text{CAN}})$	0.235	-1.684	-2.617	3.330	1.045	0.742	-0.406	-0.170	-0.00577
	(2.996)	(6.449)	(2.183)	(3.894)	(0.992)	(0.667)	(0.370)	(1.976)	(0.0261)
$-\Delta \ln(1+\tau_j^{\text{US}})$	-0.772	0.673	0.777	-4.159	2.186	0.264	-1.307*	0.748	0.0467
	(4.590)	(10.44)	(5.313)	(6.746)	(1.875)	(0.972)	(0.662)	(2.978)	(0.0648)
R-squared	0.119	0.058	0.025	0.046	0.025	0.024	0.014	0.061	0.005
Panel C: High-Income (n=27,901)									
$-\Delta \ln(1+\tau_j^{\text{CAN}})$	2.398	-4.121	-2.574	10.74***	1.260	0.524	-0.0567	-3.414	0.0349
	(3.232)	(5.339)	(2.151)	(3.396)	(1.015)	(0.813)	(0.208)	(2.758)	(0.0353)
$-\Delta \ln(1+\tau_j^{\text{US}})$	3.005	26.26***	-10.54**	-13.77*	1.899	-2.105	-0.999***	2.237	0.0188
	(4.249)	(9.827)	(4.887)	(7.364)	(1.944)	(1.586)	(0.282)	(3.733)	(0.0509)
R-squared	0.124	0.094	0.062	0.049	0.018	0.039	0.010	0.056	0.005

Note: Dependent variable is cumulative earnings during 1989-2004 divided by the worker's average real earnings in years with strictly positive earnings during 1986-1988. The independent variables of interest are the 1988-1998 tariff cuts facing U.S. exports to Canada ($-\Delta \ln(1+\tau_j^{\text{CAN}})$) or facing Canadian exports to the U.S. ($-\Delta \ln(1+\tau_j^{\text{US}})$) in the worker's initial industry. A positive (negative) coefficient means that larger tariff cuts in the worker's initial industry lead to increased (decreased) cumulative earnings. Column (1) examines total years worked, (2) years worked at the initial firm, (3) at firms other than the initial firm, but in the same initial 4-digit industry, (4) in manufacturing industries (NAICS=3xxx) other than the initial industry, (5) in construction (NAICS=22xx,23xx), (6) in mining (NAICS=21xx), (7) in agriculture (NAICS=1xxx), (8) in services (NAICS≥4xxx), or (9) in a firm with unknown industry code. Each worker-year is assigned to only one category in columns (2) through (9) based on the primary (highest-earning) job, so the coefficients in columns (2) through (9) sum to the overall effect in column (1). All specifications include extensive worker, initial firm, and initial industry controls, described in Kovak and Morrow (2022). Standard errors clustered by 4-digit NAICS industry. *** p<0.01, ** p<0.05, * p<0.1.