Online Appendix for:

Trade Liberalization and Firm Productivity:

Estimation Methods Matter *

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Abstract

In this online appendix we present results at the 3-digit (and when possible at the 4-digit) industry level for: (i) tariffs and effective rates of protection, (ii) the association between the three different productivity estimates we study in the main text of the paper, and (iii) Melitz-Polanec productivity growth decompositions (1981 – 1991).

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1 Introduction

Throughout the appendix will refer to each of the 22 industries in the Colombian manufacturing by their respective 3-digit ISIC code. Table 1 lists the industries and their codes.

3-digit ISIC code	Industry Name
311	Food Processing
313	Beverages
321	Textiles
322	Apparel
323	Leather Products
324	Shoes
331	Finished Wood Products
332	Furniture
341	Paper
342	Printing and Publishing
351	Industrial Chemicals
352	Other Chemicals
355	Rubber Products
356	Plastic Products
362	Glass Products
369	Non-metallic Mineral Products
371	Iron and Steel
381	Metal Products
382	Non-electrical Machinery
383	Electrical Machinery
384	Transportation Equipment
385	Professional/Scientific Equipment

Table 1: ISIC Codes.

Tariff data is available at the 4-digit level. A table relating 3-digit and 4-digit industries in the Colombian manufacturing sector is provided at the end of this appendix.

2 Tariffs and Effective Rates of Protection by Industry

ISIC	min tariff	max tariff	ISIC	min tariff	max tariff
3111	0.265	0.411	3513	0.266	0.398
3112	0.298	0.470	3521	0.288	0.463
3113	0.413	0.653	3522	0.092	0.139
3114	0.285	0.446	3523	0.367	0.637
3115	0.170	0.401	3529	0.214	0.343
3116	0.260	0.382	3551	0.181	0.274
3117	0.375	0.620	3559	0.397	0.585
3118	0.169	0.289	3560	0.490	0.812
3119	0.000	0.633	3620	0.269	0.430
3121	0.259	0.415	3691	0.218	0.351
3122	0.090	0.110	3692	0.136	0.224
3131	0.568	0.930	3699	0.280	0.453
3132	0.488	0.798	3710	0.185	0.288
3133	0.325	0.475	3811	0.337	0.559
3134	0.400	0.660	3812	0.400	0.797
3211	0.403	0.815	3813	0.252	0.449
3212	0.655	1.224	3819	0.326	0.550
3213	0.672	1.331	3821	0.089	0.205
3214	0.700	1.255	3822	0.059	0.189
3215	0.450	0.721	3823	0.152	0.270
3219	0.460	0.806	3824	0.162	0.271
3220	0.657	1.217	3825	0.220	0.476
3231	0.191	0.336	3829	0.236	0.417
3232	0.425	0.425	3831	0.254	0.474
3233	0.464	0.775	3832	0.226	0.329
3240	0.564	0.934	3833	0.365	1.005
3311	0.382	0.604	3839	0.284	0.468
3312	0.445	0.735	3841	0.173	0.287
3319	0.358	0.592	3842	0.197	0.496
3320	0.400	0.823	3843	0.367	0.578
3411	0.223	0.369	3844	0.404	0.772
3412	0.392	0.647	3845	0.101	0.198
3419	0.308	0.482	3849	0.371	0.613
3420	0.362	0.511	3851	0.196	0.314
3511	0.180	0.290	3852	0.208	0.329
3512	0.054	0.128	Pooled	0.000	1.331

Table 2: Import tariffs in the Colombian manufacturing sector 1981-1988 (4-digit ISIC).

ISIC	min ERP	max ERP	ISIC	min ERP	max ERP
311	0.791	1.470	352	0.250	0.413
313	0.574	1.349	355	0.536	1.004
321	0.826	2.033	356	0.712	1.467
322	0.734	1.900	362	0.360	0.561
323	0.441	0.990	369	0.383	0.625
324	0.821	1.674	371	0.242	0.395
331	0.649	1.182	381	0.585	0.988
332	0.565	1.371	382	0.163	0.372
341	0.415	0.668	383	0.370	0.815
342	0.360	0.595	384	0.504	1.058
351	0.208	0.378	385	0.224	0.428

Table 3: Effective rate of protection in the Colombian manufacturing sector 1981-1991 (3-digit ISIC).

3 Different Methodologies, Different Estimates

ISIC	LP	ACF	GNR	ISIC	LP	ACF	GNR
311	0.651	1.280	0.258	352	0.369	0.739	0.203
313	0.051	0.840	0.407	355	0.281	0.564	0.342
321	1.745	0.489	0.199	356	0.333	0.581	0.148
322	0.352	0.586	0.147	362	0.154	0.464	0.230
323	0.431	0.562	0.123	369	0.204	0.829	0.254
324	0.449	0.485	0.114	371	0.180	0.659	0.297
331	0.144	0.376	0.148	381	0.101	0.529	0.157
332	0.147	0.308	0.137	382	1.393	0.771	0.219
341	0.235	2.249	0.222	383	0.098	0.583	0.178
342	0.175	0.458	0.144	384	0.114	0.602	0.258
351	0.164	0.736	0.234	385	0.369	0.590	0.169

Table 4: Coefficient of variation of LP, ACF, and GNR productivity estimates by industry.

	LP	ACF	GNR		LP	ACF	GNR
311				**352**			
LP	1			LP	1		
ACF	0.355	1		ACF	0.181	1	
GNR	-0.402	-0.794	1	GNR	0.093	0.875	1
313				**355**			
LP	1			LP	1		
ACF	0.341	1		ACF	0.557	1	
GNR	0.338	0.885	1	GNR	0.517	0.891	1
321				**356**			
LP	1			LP	1		
ACF	0.639	1		ACF	-0.058	1	
GNR	0.384	0.802	1	GNR	-0.303	0.858	1
322				**362**			
LP	1			LP	1		
ACF	0.306	1		ACF	0.083	1	
GNR	0.249	0.887	1	GNR	-0.321	0.750	1
323				**369**			
LP	1			LP	1		
ACF	0.624	1		ACF	0.209	1	
GNR	0.478	0.779	1	GNR	0.033	0.829	1
324				**371**			
LP	1			LP	1		
ACF	0.289	1		ACF	-0.003	1	
GNR	-0.070	0.724	1	GNR	-0.369	0.809	1
331				**381**			
LP	1			LP	1		
ACF	-0.418	1		ACF	0.197	1	
GNR	-0.705	0.819	1	GNR	-0.008	0.885	1
332				**382**			
LP	1			LP	1		
ACF	0.284	1		ACF	0.023	1	
GNR	-0.203	0.743	1	GNR	-0.055	0.944	1
341				**383**			
LP	1			LP	1		
ACF	0.328	1		ACF	0.248	1	
GNR	0.134	0.881	1	GNR	0.255	0.938	1
342				**384**			
LP	1			LP	1		
ACF	0.176	1		ACF	0.170	1	
GNR	-0.073	0.802	1	GNR	0.129	0.844	1
351				**385**			
LP	1			LP	1		
ACF	0.267	1		ACF	-0.416	1	
GNR	-0.103	0.755	1	GNR	-0.787	0.701	1

Table 5: Spearman correlations of productivity estimates by 3-digit industry.

4   Productivity growth decompositions

All productivity growth decompositions are computed comparing years 1981 and 1991.

ISIC	$\Delta\Phi$	$\Delta\bar{\omega}_S$	$\Delta\mathrm{cov}_S$	$s_{XH}\left(\Phi_{SH}-\Phi_{XH}\right)$	$s_{EL}\left(\Phi_{EL}-\Phi_{SL}\right)$
3111	0.109	0.275	-0.162	-0.001	-0.003
3112	0.187	0.060	0.123	0.012	-0.008
3113	-0.048	0.000	-0.052	0.006	-0.001
3114	0.007	-0.055	0.031	0.011	0.019
3115	0.069	0.109	-0.043	0.006	-0.004
3116	0.109	-0.039	0.165	0.012	-0.028
3117	0.020	0.007	0.009	0.008	-0.005
3118	0.017	-0.017	0.035	-0.001	-0.001
3119	0.080	0.039	0.049	0.014	-0.023
3121	0.054	0.021	0.029	0.005	-0.001
3122	0.115	0.044	0.077	0.007	-0.013
3131	0.033	0.005	0.026	0.002	0.000
3132	0.001	0.018	-0.016	0.001	-0.001
3133	0.016	0.003	0.013	0.000	0.000
3134	0.014	-0.001	0.016	0.000	-0.001
3211	0.050	0.019	0.004	0.013	0.014
3212	0.039	-0.024	0.044	0.010	0.009
3213	-0.003	-0.008	0.009	0.001	-0.006
3214	-0.028	-0.034	0.009	0.000	-0.004
3215	-0.023	-0.009	-0.014	0.000	0.000
3219	-0.145	0.007	-0.146	0.005	-0.011
3220	-0.003	-0.01	0.011	0.006	-0.010
3231	0.053	0.068	-0.018	0.001	0.002
3233	0.092	0.361	-0.257	-0.007	-0.005
3240	0.045	-0.048	0.09	0.017	-0.015
3311	-0.012	-0.002	-0.023	0.034	-0.020
3312	-0.053	-0.004	-0.025	0.000	-0.023
3319	-0.007	-0.038	0.027	-0.004	0.008
3320	0.001	-0.011	0.034	-0.005	-0.016
3411	-0.048	-0.005	-0.039	-0.005	0.000
3412	0.064	0.030	0.040	0.005	-0.011
3419	-0.010	0.008	0.003	-0.015	-0.006
3420	0.037	-0.004	0.042	-0.003	0.003
3511	0.030	0.015	-0.006	0.001	0.020
3512	0.026	0.060	-0.048	0.004	0.010
3513	-0.006	0.028	-0.048	0.004	0.010
3521	0.113	0.033	0.092	0.005	-0.018
3522	-0.017	0.008	-0.030	-0.001	0.006
3523	-0.032	0.012	0.019	-0.002	-0.061
3529	0.037	0.029	0.010	0.001	-0.003
3551	-0.052	0.019	-0.071	0.003	-0.003
3559	0.000	0.004	-0.008	0.013	-0.009
3560	0.07	-0.003	0.035	0.001	0.038
3620	-0.062	-0.014	-0.051	-0.001	0.004
3691	-0.003	-0.013	0.005	-0.001	0.006
3692	0.044	0.041	0.038	-0.030	-0.005
3699	0.106	0.021	0.145	-0.074	0.015
3710	0.033	-0.015	0.045	0.003	0.000
3811	0.004	0.001	0.002	0.003	-0.002
3812	-0.024	0.009	-0.028	-0.002	-0.003
3813	-0.011	0.001	-0.014	0.006	-0.004
3819	-0.024	0.002	-0.027	-0.001	0.002
3821	-0.014	-0.003	-0.012	0.000	0.000
3822	-0.005	-0.071	0.071	0.002	-0.007
3823	-0.535	-0.006	-0.004	-0.532	0.006
3824	0.001	0.005	0.006	-0.004	-0.006
3825	0.038	0.002	0.041	0.007	-0.013
3829	0.023	0.017	0.013	-0.004	-0.003
3831	0.019	0.019	0.002	0.003	-0.005
3832	0.022	0.011	0.009	0.007	-0.006
3833	0.016	0.014	-0.008	0.006	0.004
3839	0.013	-0.002	0.015	0.002	-0.002
3841	0.004	0.003	-0.045	0.002	0.045
3842	-0.014	-0.043	0.008	0.028	-0.006
3843	0.005	0.017	-0.011	0.003	-0.004
3844	0.018	-0.022	0.021	0.039	-0.020
3845	-0.130	-0.055	-0.074	0.000	-0.001
3849	0.018	0.043	-0.021	0.000	-0.004
3851	0.028	-0.025	0.045	-0.004	0.011
3852	-0.032	-0.170	0.136	-0.004	0.006

Table 6: Melitz-Polanec decomposition of LP productivity growth following tariff cut.

ISIC	$\Delta\Phi$	$\Delta\bar{\omega}_S$	$\Delta\mathrm{cov}_S$	$s_{XH}(\Phi_{SH}-\Phi_{XH})$	$s_{EL}(\Phi_{EL}-\Phi_{SL})$
3111	0.136	0.053	0.058	-0.024	0.049
3112	0.095	0.074	0.021	0.029	-0.029
3113	-0.251	-0.020	-0.243	0.010	0.002
3114	-0.230	-0.077	-0.004	-0.130	-0.018
3115	-0.152	-0.079	-0.073	0.004	-0.004
3116	0.125	0.032	0.117	0.015	-0.039
3117	-0.030	0.074	-0.109	0.005	0.000
3118	-0.113	-0.015	-0.091	-0.002	-0.005
3119	0.118	0.087	0.128	-0.038	-0.059
3121	0.110	0.103	0.022	0.004	-0.020
3122	0.040	0.029	0.022	-0.015	0.003
3131	0.233	0.046	0.176	0.012	-0.001
3132	-0.108	-0.212	0.104	0.012	-0.012
3133	0.303	0.314	-0.010	-0.001	0.000
3134	-0.049	-0.105	0.048	0.011	-0.002
3211	0.165	0.045	0.023	0.019	0.078
3212	0.265	0.000	0.324	0.015	-0.073
3213	0.007	-0.008	0.021	0.004	-0.008
3214	-0.093	-0.108	0.015	0.000	0.000
3215	0.050	0.064	-0.014	0.000	0.000
3219	0.013	0.094	-0.066	0.006	-0.021
3220	0.133	-0.017	0.179	0.009	-0.037
3231	-0.074	0.123	-0.168	-0.033	0.005
3233	0.015	-0.031	0.026	-0.039	0.059
3240	0.015	0.023	-0.028	0.018	0.002
3311	-0.093	0.014	-0.037	-0.037	-0.033
3312	0.341	0.182	0.055	0.000	0.103
3319	0.034	0.047	-0.003	0.008	-0.018
3320	0.288	0.077	0.338	-0.012	-0.115
3411	0.043	0.256	-0.199	-0.010	-0.004
3412	0.096	0.046	0.067	0.019	-0.035
3419	0.005	-0.137	0.234	-0.083	-0.008
3420	0.001	0.065	-0.071	0.003	0.005
3511	0.090	0.025	-0.032	-0.027	0.124
3512	0.077	0.228	-0.198	0.012	0.034
3513	0.381	0.205	0.220	-0.078	0.034
3521	0.395	0.096	0.404	-0.040	-0.065
3522	0.440	0.020	0.053	-0.014	0.382
3523	0.093	0.071	0.063	0.004	-0.046
3529	0.175	0.208	-0.001	-0.009	-0.023
3551	0.187	0.063	0.127	0.006	-0.009
3559	0.122	0.044	0.076	0.013	-0.011
3560	0.134	0.014	0.039	0.005	0.077
3620	0.067	-0.022	0.012	-0.002	0.078
3691	0.012	0.021	-0.031	0.021	0.001
3692	0.061	-0.050	0.118	0.004	-0.010
3699	0.067	0.032	0.066	-0.119	0.089
3710	0.163	0.155	0.001	0.011	-0.003
3811	0.177	0.135	0.040	-0.002	0.004
3812	1.924	0.074	2.248	-0.027	-0.370
3813	0.296	0.129	0.076	-0.023	0.114
3819	0.287	0.077	0.213	0.019	-0.022
3821	-0.244	-0.126	-0.118	0.000	0.000
3822	-0.116	-0.066	-0.014	0.004	-0.040
3823	-0.017	0.050	-0.066	-0.094	0.093
3824	0.104	0.073	0.010	0.001	0.020
3825	0.504	0.406	0.317	-0.114	-0.105
3829	0.289	0.174	0.171	0.116	-0.171
3831	0.443	0.228	0.213	-0.007	0.009
3832	0.113	0.041	0.065	0.015	-0.008
3833	0.927	0.054	0.096	0.018	0.760
3839	0.212	0.096	0.118	0.002	-0.004
3841	0.402	0.192	0.472	-0.004	-0.258
3842	-0.326	-0.346	-0.009	0.019	0.009
3843	-0.044	0.034	-0.075	0.007	-0.011
3844	-0.053	-0.080	0.050	0.242	-0.267
3845	-0.265	0.114	-0.375	0.000	-0.004
3849	0.063	0.130	-0.074	0.000	0.007
3851	0.918	0.038	0.250	0.004	0.626
3852	-0.080	-0.011	-0.078	0.000	0.009

Table 7: Melitz-Polanec decomposition of ACF productivity growth following tariff cut.

ISIC	$\Delta\Phi$	$\Delta\bar{\omega}_S$	$\Delta\mathrm{cov}_S$	$s_{XH}\left(\Phi_{SH}-\Phi_{XH}\right)$	$s_{EL}\left(\Phi_{EL}-\Phi_{SL}\right)$
3111	-0.009	-0.028	0.039	0.016	-0.036
3112	-0.017	-0.013	-0.003	-0.014	0.014
3113	-0.108	-0.011	-0.108	0.012	0.000
3114	-0.080	-0.080	-0.125	0.127	-0.002
3115	0.027	-0.011	0.032	0.002	0.003
3116	0.022	-0.029	0.051	-0.015	0.014
3117	0.068	-0.007	0.084	-0.010	0.001
3118	-0.077	-0.017	-0.062	0.001	0.001
3119	-0.051	-0.006	-0.046	-0.008	0.009
3121	-0.043	-0.027	-0.025	0.001	0.008
3122	-0.060	-0.051	-0.014	0.003	0.002
3131	0.182	0.052	0.119	0.012	-0.001
3132	-0.077	-0.163	0.066	0.007	0.013
3133	0.032	-0.072	0.103	0.000	0.000
3134	0.042	-0.051	0.082	0.014	-0.003
3211	0.031	0.000	0.021	0.016	-0.006
3212	0.010	-0.045	0.023	0.011	0.020
3213	-0.007	0.001	0.000	-0.004	-0.004
3214	-0.034	-0.015	-0.018	0.000	-0.002
3215	0.008	0.012	-0.004	0.000	0.000
3219	-0.010	0.050	-0.057	0.001	-0.005
3220	-0.010	-0.006	-0.005	0.003	-0.001
3231	0.135	0.072	0.057	0.001	0.005
3233	-0.014	-0.026	0.028	-0.023	0.008
3240	-0.035	0.03	-0.074	-0.003	0.011
3311	-0.028	-0.002	0.001	-0.009	-0.018
3312	0.147	0.071	0.030	0.000	0.046
3319	0.032	0.021	0.014	0.008	-0.011
3320	0.048	0.025	0.031	-0.002	-0.005
3411	0.030	0.056	-0.024	-0.004	0.002
3412	0.078	0.059	0.020	0.006	-0.008
3419	0.108	0.024	0.110	-0.022	-0.004
3420	0.068	0.064	0.016	-0.022	0.010
3511	-0.026	-0.009	-0.001	-0.005	-0.010
3512	-0.002	-0.029	0.029	0.003	-0.005
3513	0.071	0.024	0.056	-0.011	0.003
3521	0.130	-0.006	0.147	0.009	-0.020
3522	0.017	0.003	0.010	-0.007	0.011
3523	-0.017	0.038	0.037	0.003	-0.095
3529	0.048	0.057	0.000	0.002	-0.011
3551	0.277	0.073	0.208	0.003	-0.007
3559	0.081	0.018	0.068	-0.002	-0.003
3560	0.004	0.009	0.003	-0.006	-0.001
3620	0.245	0.064	0.143	-0.011	0.050
3691	0.032	-0.015	0.029	0.023	-0.006
3692	0.203	0.116	0.042	0.050	-0.0053
3699	0.102	0.026	0.098	-0.033	0.010
3710	0.090	0.084	0.005	0.006	-0.006
3811	0.079	0.063	0.017	-0.001	0.000
3812	0.033	0.017	0.029	-0.012	-0.002
3813	0.135	0.050	0.069	-0.011	0.028
3819	0.019	-0.001	0.010	0.008	0.001
3821	-0.050	-0.048	-0.002	0.000	0.000
3822	-0.026	-0.024	0.018	0.003	-0.023
3823	-0.013	0.021	-0.033	-0.067	0.066
3824	0.069	0.045	0.016	0.000	0.009
3825	-0.006	-0.008	0.045	-0.050	0.006
3829	0.098	0.063	0.059	0.021	-0.045
3831	0.097	0.026	0.054	0.001	0.017
3832	0.015	-0.003	0.011	0.008	-0.001
3833	0.093	0.019	0.080	0.009	-0.014
3839	0.049	0.043	0.014	0.004	-0.012
3841	0.287	0.120	0.421	-0.004	-0.250
3842	-0.275	-0.267	-0.011	0.010	-0.007
3843	0.076	0.033	0.046	0.000	-0.003
3844	0.021	-0.043	0.050	-0.057	0.071
3845	-0.341	-0.036	-0.302	0.000	-0.003
3849	0.024	0.002	0.034	0.000	-0.012
3851	-0.027	-0.010	0.024	0.005	-0.046
3852	-0.059	-0.004	-0.048	0.002	-0.009

Table 8: Melitz-Polanec decomposition of GNR productivity growth following tariff cut.

ISIC	$\Delta\Phi$	$\Delta\bar{\omega}_S$	Δcov_S	$s_{XH}\left(\Phi_{SH}-\Phi_{XH}\right)$	$s_{EL}\left(\Phi_{EL}-\Phi_{SL}\right)$
			Levinsohn-Petrin		
311	0.078	0.024	0.059	-0.001	-0.003
313	-0.019	0.000	-0.030	0.008	0.003
321	-0.013	0.018	-0.008	-0.014	-0.008
322	0.108	0.021	0.068	0.041	-0.022
323	0.052	0.252	-0.206	0.011	-0.006
324	0.127	-0.013	0.137	0.017	-0.014
331	0.077	0.001	0.082	0.023	-0.029
332	0.013	0.032	0.002	-0.003	-0.019
341	0.016	0.011	0.006	-0.001	0.000
342	0.046	-0.017	0.054	-0.002	0.011
351	-0.024	0.000	-0.034	0.008	0.001
352	0.010	0.016	0.021	-0.004	-0.023
355	-0.064	0.086	-0.152	0.009	-0.007
356	0.023	0.018	0.012	-0.006	-0.001
362	-0.073	0.000	-0.078	0.002	0.004
369	0.069	0.023	0.087	-0.047	0.006
371	-0.131	-0.064	-0.082	0.011	0.003
381	-0.017	0.005	-0.02	-0.001	0.000
382	-0.075	0.010	0.020	-0.085	-0.02
383	-0.008	-0.005	-0.009	0.006	0.000
384	-0.006	0.007	-0.018	0.007	-0.002
385	0.202	0.036	0.141	-0.003	0.029
			Ackerberg-Caves-Frazer		
311	-0.358	-0.128	-0.246	-0.019	0.036
313	-0.108	-0.02	-0.200	0.075	0.037
321	0.117	0.071	0.095	-0.020	-0.029
322	0.350	0.067	0.182	0.142	-0.041
323	-0.069	0.058	-0.127	-0.010	0.01
324	1.186	0.105	1.396	0.047	-0.361
331	0.674	0.085	0.640	0.068	-0.118
332	0.101	0.056	0.067	0.014	-0.035
341	0.055	0.002	0.058	0.000	-0.005
342	0.047	0.073	-0.023	-0.018	0.014
351	0.003	-0.025	0.026	-0.028	0.029
352	0.017	0.089	-0.030	-0.006	-0.035
355	-0.170	-0.018	-0.160	0.017	-0.01
356	-0.039	-0.056	0.013	0.011	-0.007
362	-0.074	-0.08	-0.069	0.008	0.068
369	0.013	-0.013	0.068	-0.077	0.035
371	0.089	-0.010	0.094	0.011	-0.005
381	0.289	-0.028	0.332	0.003	-0.019
382	0.224	0.232	0.156	-0.072	-0.092
383	0.021	-0.027	0.037	0.020	-0.01
384	0.051	-0.040	0.103	-0.029	0.017
385	0.176	-0.042	0.063	0.018	0.137
			Gandhi-Navarro-Rivers		
311	0.018	-0.001	0.000	0.024	-0.005
313	-0.079	-0.012	-0.153	0.079	0.007
321	0.017	0.003	0.020	0.006	-0.012
322	0.019	-0.001	0.013	0.015	-0.008
323	0.101	0.010	0.091	0.000	-0.001
324	0.084	-0.003	0.068	0.007	0.012
331	0.092	0.023	0.063	0.017	-0.011
332	0.032	-0.010	0.038	0.008	-0.004
341	0.033	0.037	-0.010	0.000	0.006
342	0.067	0.068	-0.023	-0.019	0.041
351	-0.028	-0.017	-0.004	-0.002	-0.005
352	0.000	0.034	0.003	-0.001	-0.036
355	-0.204	0.051	-0.262	0.008	0.000
356	-0.013	-0.028	0.011	0.003	0.000
362	0.172	0.013	0.119	-0.007	0.047
369	0.146	0.023	0.109	0.006	0.007
371	0.058	0.034	0.027	0.003	-0.005
381	0.013	-0.025	0.029	-0.001	0.01
382	0.089	0.110	0.001	-0.016	-0.006
383	0.010	-0.021	0.031	0.005	-0.005
384	-0.056	-0.015	-0.053	-0.005	0.017
385	-0.080	-0.061	-0.015	0.008	-0.012

Table 9: Melitz-Polanec decomposition of productivity growth following ERP cut.

	$\Delta\Phi$	$\Delta\bar{\omega}_S$	$\Delta\mathrm{cov}_S$	$s_{XH}\left(\Phi_{SH}-\Phi_{XH}\right)$	$s_{EL}\left(\Phi_{EL}-\Phi_{SL}\right)$
$\Delta\,Tariff$					
LP	0.614	0.571	0.600	0.600	0.314
ACF	0.743	0.729	0.629	0.543	0.400
GNR	0.614	0.529	0.700	0.514	0.400
ΔERP					
LP	0.545	0.727	0.545	0.500	0.455
ACF	0.727	0.455	0.682	0.545	0.409
GNR	0.682	0.500	0.682	0.682	0.455

Table 10: Proportion of industry-level productivity changes that have expected positive sign.

	$\Delta Tariff$				ΔERP		

$\Delta\Phi$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.221	1		ACF	0.260	1	
GNR	0.102	0.523	1	GNR	0.133	0.221	1

$\Delta\bar\omega_S$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.293	1		ACF	-0.112	1	
GNR	0.147	0.435	1	GNR	-0.032	0.596	1

$\Delta\mathrm{cov}_S$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.198	1		ACF	0.390	1	
GNR	-0.110	0.482	1	GNR	0.065	0.328	1

$s_{XH}\left(\Phi_{SH}-\Phi_{XH}\right)$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.312	1		ACF	0.571	1	
GNR	0.072	0.443	1	GNR	0.294	0.609	1

$s_{EL}\left(\Phi_{EL}-\Phi_{SL}\right)$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.468	1		ACF	0.819	1	
GNR	-0.019	0.208	1	GNR	0.444	0.320	1

Table 11: Spearman correlation of component-wise LP, ACF, and GNR productivity growth.

	ΔTariff				ΔERP		

$\Delta \Phi$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.493	1		ACF	0.409	1	
GNR	0.423	0.535	1	GNR	0.409	0.545	1

$\Delta \bar{\omega}_S$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.500	1		ACF	0.364	1	
GNR	0.343	0.471	1	GNR	0.364	0.318	1

$\Delta \mathrm{cov}_S$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.429	1		ACF	0.409	1	
GNR	0.414	0.529	1	GNR	0.409	0.500	1

$s_{XH} \left(\Phi_{SH} - \Phi_{XH} \right)$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.400	1		ACF	0.364	1	
GNR	0.371	0.400	1	GNR	0.364	0.455	1

$s_{EL} \left(\Phi_{EL} - \Phi_{SL} \right)$

	LP	ACF	GNR		LP	ACF	GNR
LP	1			LP	1		
ACF	0.225	1		ACF	0.273	1	
GNR	0.155	0.239	1	GNR	0.273	0.227	1

Table 12: Frequency with which the pairwise LP, ACF, and GNR productivity growth components have the same expected positive sign.

Colombia Industrial Survey
International Standard Industrial Classification
(three and four digit levels)

Sector #	Sector Name
311	*Food Products*
3111	Butchering and meat canning
3112	Dairy Products
3113	Vegetable and Fruit Canning
3114	Fish, crustaceans, and other seafood canning
3115	Oils, and vegetable and animal fats
3116	Grain mill products
3117	Bakery products
3118	Sugar refining and sugar products
3119	Cocoa, chocolate and confectionery products
312	*Other Food Products*
3121	Miscellaneous food products
3122	Animal feed
3123	Dietetic products
313	*Beverages*
3131	Spirits and liquor
3132	Wine
3133	Malt Products
3134	Nonalcoholic beverages and soda
314	*Tobacco*
321	*Textiles*
3211	Broadwoven fabric mills and textile finishing
3212	Textile products, excl. clothing
3213	Knitting mills
3214	Carpets and rugs
3215	Cordage
3216	Cotton products
3217	Wool products
3218	Synthetic fiber textiles
3219	Other textile products
322	*Clothing and Apparel*
3220	Clothing, excl. shoes
3221	Clothing, excl. shoes
323	*Leather Products (excl. Clothing and Shoes)*
3231	Leather tanning and dyeing
3232	Furskins
3233	Other leather products

Sector #	Sector Name
324	*Leather Shoes*
3240	Shoes and shoe parts, except those principally of metal
331	*Lumber, Wood and Cork Products (excl. Furniture)*
3311	Sawmills
3312	Wood containers and small wicker products
3319	Other wood and cork products
332	*Furniture*
3320	Furniture and accessories, except those principally of metal
341	*Paper*
3411	Pulp mills
3412	Paper and cardboard boxes and containers
3419	Other paper and cardboard products
342	*Printing and Publishing*
3420	Printing and publishing
351	*Industrial Chemicals*
3511	Basic industrial chemicals, excl. fertilizers
3512	Fertilizers and pesticides
3513	Synthetic resins, plastics and artificial fiber, excl. glass
352	*Other Chemicals*
3521	Paint, varnish and lacquer
3522	Pharmaceuticals
3523	Soaps, detergents, perfumes and cosmetics
3528	Miscellaneous chemical products
3529	Other chemical products
353	*Petroleum Refining*
3530	Petroleum Refining
354	*Petroleum and Coal Products*
3540	Petroleum and coal products
355	*Rubber Products*
3551	Tires
3559	Other rubber products
356	*Plastic Products*
3560	Plastic products
361	*Pottery, China and Porcelain products*
3610	Pottery, china and porcelain products
362	*Glass Products*
3620	Glass products

Sector #	Sector Name
369	*Other Products of Non-metallic Minerals*
3691	Clay products used in construction
3692	Concrete, lime and plaster
3699	Other non-metallic mineral products, not classified elsewhere
371	*Iron and Steel*
3710	Iron and Steel
372	*Non-ferrous Metals*
3720	Copper and aluminum
3721	Lead and zinc
3722	Tin and nickel
3723	Precious metals
381	*Metal Products (excl. machinery and equipment)*
3811	Cutlery and handtools
3812	Metal furniture, excl. electric lamps and accessories
3813	Structural metal products
3814	Plumbing and heating products
3819	Other metal products
382	*Machinery (excl. electrical machinery)*
3821	Engines and turbines
3822	Farm machinery
3823	Metalworking and woodworking machinery
3824	General industrial machinery
3825	Office, calculating and accounting equipment
3826	Other machinery
3827	Other machinery
3829	Other machinery
383	*Electronic Machinery and Equipment*
3831	Industrial electrical machinery
3832	Radio, television and communications equipment
3833	Household electrical appliances
3839	Other electronic equipment
384	*Transportation Equipment*
3841	Shipbuilding and repair
3842	Railroad equipment
3843	Motor vehicles
3844	Motorcycles and bicycles
3845	Aircraft
3849	Other transportation equipment
385	*Professional and Scientific Equipment*
3851	Professional and scientific instruments, measuring and controlling devices
3852	Photographic and Ophthalmic Products
3853	Watches

Sector #	Sector Name
390	*Miscellaneous Manufacturing Industries*
3901	Jewelry
3902	Musical instruments
3903	Sporting goods
3903	Miscellaneous manufacturing industries
3909	Other manufacturing industries