Online supplemental material to "Trade Liberalization, Wage, and Unemployment: Theory and Evidence from Chile"

Appendix A: Derivations and comparative statics

A.1. Derivation of labor demand $l_D(\tilde{\varphi}), l_D(\varphi_D^*), l_{EX}(\tilde{\varphi})$ and $l_{EX}(\varphi_{EX}^*)$.

First, we derive labor demand of domestic firm at the average productivity level $l_D(\tilde{\varphi})$ from Equations (5), (23), and (26):

$$l_D(\tilde{\varphi}) = \frac{q_D(\tilde{\varphi})}{\tilde{\varphi}}$$

$$= \frac{\frac{\sigma k f_D\left(1+n\chi\frac{f_{EX}}{f_D}\right)}{k-\xi \quad (1+n\chi)}}{\left(\frac{k}{k-\xi}\right)^{\frac{1}{\xi}}\left(\frac{\xi(f_D+n\chi f_{EX})}{(1+n\chi)(k-\xi)\delta f_e}\right)^{\frac{1}{k}}\left[\frac{1+n\tau^{\frac{-k}{1-\psi}}(f_{Ex}/f_D)^{\frac{\xi-k}{\xi}}}{1+n\tau^{\frac{-k}{1-\psi}}(f_{Ex}/f_D)^{\frac{-k}{\xi}}}\right]^{\frac{1}{\xi}}} \tag{A.1.1}$$

Next, we derive the labor demand of domestic firms evaluated at the cutoff productivity level $l_D(\varphi_D^*)$ from $l_D(\varphi_D^*) = \left(\frac{\varphi_D^*}{\tilde{\varphi}}\right)^{\xi-\psi} l_D(\tilde{\varphi})$ and Equation (18):

$$l_D(\varphi_D^*) = \left(\frac{\varphi_D^*}{\tilde{\varphi}}\right)^{\xi-\psi} l_D(\tilde{\varphi})$$

$$= \left(\frac{k}{k-\xi}\right)^{-\frac{1}{\xi}} l_D(\tilde{\varphi}). \tag{A.1.2}$$

From Equation (6), we obtain the share of price in the domestic and export markets $p_{EX}(\varphi) = \tau p_D(\varphi)$. Substituting this into Equation (3), we can get the ratio of individual demand quantities in the domestic and export markets $q_{EX}(\varphi) = \tau^{-\sigma} q_D(\varphi)$. Therefore, combining (A1) with $q_{EX}(\tilde{\varphi}) = \tau^{-\sigma} q_D(\tilde{\varphi})$ and Equation (5), we obtain $l_{EX}(\tilde{\varphi})$:

$$\frac{l_{EX}(\tilde{\varphi})}{l_D(\tilde{\varphi})} = \frac{q_{EX}(\tilde{\varphi})}{q_D(\tilde{\varphi})} \cdot \tau^{-1} \Leftrightarrow l_{EX}(\tilde{\varphi}) = \tau^{-1-\sigma} l_D(\tilde{\varphi}). \tag{A.1.3}$$

Finally, we derive $l_{EX}(\varphi_D^*)$ from Equations (A1) and (A3) and $l_{EX}(\varphi_{EX}^*) = \left(\frac{\varphi_{EX}^*}{\tilde{\varphi}}\right)^{\xi-\psi} l_{EX}(\tilde{\varphi})$

$$l_{EX}(\varphi_{EX}^*) = \left(\frac{\varphi_{EX}^*}{\tilde{\varphi}}\right)^{\xi-\psi} \tau^{-1-\sigma} l_D(\tilde{\varphi}). \tag{A.1.4}$$

The derivation of labor demand in this appendix provides a theoretical foundation for understanding how trade liberalization causes labor allocation across firms.

A.2. Comparative statics

A.2.1. Effects of trade liberalization on wage and unemployment

In this section, we formally derive the impact of trade liberalization on the wage. As ρ is a positive constant, as shown in Equation (24), the partial derivative of $w(\tilde{\varphi})$ with respect to τ is given by:

$$\frac{\partial w(\tilde{\varphi})}{\partial \tau} = \rho \frac{\partial \tilde{\varphi}}{\partial \tau}, \tag{A. 2.1}$$

We focus on the derivative $\frac{\partial \tilde{\varphi}}{\partial \tau}$. Taking the natural logarithm of Eq. (A.2.1), we obtain:

$$\ln\tilde{\varphi} = \underbrace{\frac{1}{\xi}\ln\frac{k}{k-\xi}}_{Term1} + \underbrace{\frac{1}{k}\ln\frac{\xi(f_D+n\chi f_{EX})}{(1+n\chi)(k-\xi)\delta f_e}}_{Term2} + \underbrace{\frac{1}{\xi}\ln\frac{1+n\tau^{\frac{-k}{1-\psi}}A}{1+n\tau^{\frac{-k}{1-\psi}}B}}_{Term3} \tag{A. 2.2}$$

where $A \equiv (f_{Ex}/f_D)^{\frac{\xi-k}{\xi}}, B \equiv (f_{Ex}/f_D)^{\frac{-k}{\xi}}$. Differentiating $\ln\tilde{\varphi}$ with respect to τ,

$$\frac{1}{\tilde{\varphi}}\frac{\partial\tilde{\varphi}}{\partial\tau} = \underbrace{\frac{1}{k}\frac{n(f_{EX}-f_D)}{(1+n\chi)(f_D+n\chi f_{EX})}\cdot\frac{\partial\chi}{\partial\tau}}_{(-)} + \underbrace{\frac{1}{\xi}\frac{n(A-B)}{\left(1+n\tau^{\frac{-k}{1-\psi}}A\right)\left(1+n\tau^{\frac{-k}{1-\psi}}B\right)}}_{(-)} < 0 \tag{A. 2.3}$$

The sign of the second term in Equation (A.2.3) is determined by the relative magnitude of the constants A and B. Given $f_{EX} > f_D$ and $\frac{\partial\chi}{\partial\tau} < 0$, it implies $A > B$, both terms in Equation. (A.2.3) are strictly negative. Therefore, trade liberalization leads to an increase in wage $w(\tilde{\varphi})$.

We can derive the unemployment rate from Equations (10), (23) and (24):

$$u = 1 - \rho^{\frac{\psi}{\psi-1}}\cdot\rho\chi^{\frac{1}{\xi}}\left[\frac{k}{k-\xi}\cdot\frac{1+n\chi\left(\frac{f_{EX}}{f_D}\right)}{1+n\chi}\right]^{-\frac{\psi}{\xi}}$$

where $\rho = \frac{\sigma-1}{\sigma}$. To examine the impact of trade liberalization on the unemployment rate, we derive the partial derivative $\frac{\partial u}{\partial\tau}$. Note that τ affects u through the share of exporting firms $\chi \equiv \frac{[1-G(\varphi^*_{EX})]}{[1-G(\varphi^*_D)]} = \tau^{\sigma-1}\frac{f_{EX}}{f_D}$. By applying the chain rule, we have:

$$\frac{\partial u}{\partial\tau} = \frac{\partial u}{\partial\chi}\frac{\partial\chi}{\partial\tau} \tag{A. 2.4}$$

Differentiating u with respect to χ yields:

$$\frac{\partial u}{\partial \chi} = -\frac{(1-u)}{\xi\chi}\left[1 - \frac{\psi n\chi\left(\frac{f_{EX}}{f_D} - 1\right)}{\left(1 + n\chi\frac{f_{EX}}{f_D}\right)(1+n\chi)}\right]. \quad \text{(A. 2.5)}$$

Finally, combining Equation (A.2.4) with $\frac{\partial \chi}{\partial \tau} = -\frac{(\sigma-1)\chi}{\tau} < 0$ and $\xi = (\sigma-1)(1-\psi)$, the comparative static result is given by:

$$\frac{\partial u}{\partial \tau} = \underbrace{\frac{(1-u)}{(1-\psi)\tau}}_{(+)} \cdot \underbrace{[1-C]}_{(+)} > 0 \quad \text{(A. 2.6)}$$

where $C \equiv \frac{\psi n\chi\left(\frac{f_{EX}}{f_D}-1\right)}{\left(1+n\chi\frac{f_{EX}}{f_D}\right)(1+n\chi)}$. First, we note that the first term is negative. Next, we examine the term in the brackets, $[1-C]$.Given $f_{EX} > f_D$ and $0 < \psi < 1$, the term C is strictly positive. Moreover, since the denominator of C is strictly greater than the numerator of C, it follows that $C < 1$. Therefore, the entire expression in the brackets is positive. Thus, we find that trade liberalization (a decrease in τ) leads to a decrease in the unemployment rate.

A.2.2. Effects of the rent-sharing parameter on wage and unemployment

We discuss the impact of rent-sharing on each variable. Analogous to trade liberalization, we discuss the case of decreasing rent-sharing (i.e., a decrease in the proportion of profits distributed to workers by firms):

$$\frac{\partial \varphi_D^*}{\partial \psi} < 0, \quad \frac{\partial \varphi_{EX}^*}{\partial \psi} > 0, \frac{\partial q_D(\tilde{\varphi})}{\partial \psi} < 0, \frac{\partial \tilde{\varphi}}{\partial \psi} < 0, \frac{\partial w(\tilde{\varphi})}{\partial \psi} < 0, \quad \frac{\partial u}{\partial \psi} = -\frac{\partial \rho^{\frac{\psi}{\psi-1}}}{\partial \psi}\left(\frac{\tilde{\varphi}}{\bar{w}}\right) - \frac{\partial\left(\frac{\tilde{\varphi}}{\bar{w}}\right)}{\partial \psi}\rho^{\frac{\psi}{\psi-1}} \gtrless 0. \quad \text{(A.2.7)}$$

Similar to trade liberalization, a reduction in the rent-sharing parameter leads to an increase in the productivity cutoff for domestic firms and a decrease in the cutoff for exporting firms, thereby raising the economy's overall average productivity and wages. However, the impact of rent-sharing on the unemployment rate is ambiguous. We can decompose the effect into two terms. The first term captures an increase in market competitiveness due to the reduced rent-sharing ($\frac{\partial \rho^{\frac{\psi}{\psi-1}}}{\partial \psi} < 0$), which, in turn, leads to a decrease in the unemployment rate. By contrast, the second term captures a decrease in the labor profitability due to the reduced rent-sharing ($\frac{\partial\left(\frac{\tilde{\varphi}}{\bar{w}}\right)}{\partial \psi} > 0$), which leads to an increase in the unemployment rate.

Appendix B: Appendix tables

Table A1 Correspondence between communes and functional labor market areas (FLMAs).

Commune number	Commune name	FLMA codes		Codes in CASEN			
		Original	Corrected	1998	2000	2003	2006
1	Iquique	1101	1101	1301	1301	1301	1101
2	Camiña	1101	1101	1303	1303	1303	1102
3	Colchane[ab]		1101	1304	1304	1304	1103
4	Huara	1101	1101	1302	1302	1302	1104
5	Pica	1101	1101	1305	1305	1305	1105
6	Pozo Almonte	1101	1101	1306	1306	1306	1106
7	Alto Hospicio[ab(2004)]		1101			1307	1107
8	Arica	1201	1201	1101	1101	1101	1201
9	Camarones[ab]		1201	1102	1102	1102	1202
10	Putre	1201	1201	1201	1201	1201	1301
11	General Lagos[ab]		1201	1202	1202	1202	1302
12	Antofagasta	2101	2101	2301	2301	2301	2101
13	Mejillones	2101	2101	2302	2302	2302	2102
14	Sierra Gorda	2101	2101	2303	2303	2303	2103
15	Taltal	2101	2101	2304	2304	2304	2104
16	Calama	2201	2201	2201	2201	2201	2201
17	Ollagüe	2201	2201				2202
18	San Pedro de Atacama	2201	2201	2203	2203	2203	2203
19	Tocopilla	2301	2301	2101	2101	2101	2301
20	María Elena	2301	2301	2102	2102	2102	2302
21	Copiapó	3101	3101	3201	3201	3201	3101
22	Caldera	3101	3101	3202	3202	3202	3102
23	Tierra Amarilla	3101	3101	3203	3203	3203	3103
24	Chañaral	3202	3202	3101	3101	3101	3201
25	Diego de Almagro	3202	3202	3102	3102	3102	3202
26	Vallenar	3301	3301	3301	3301	3301	3301
27	Alto del Carmen	3301	3301	3304	3304	3304	3302
28	Freirina	3301	3301	3302	3302	3302	3303
29	Huasco	3301	3301	3303	3303	3303	3304
30	La Serena	4101	4101	4101	4101	4101	4101
31	Coquimbo	4101	4101	4103	4103	4103	4102
32	Andacollo	4101	4101	4104	4104	4104	4103
33	La Higuera	4101	4101	4102	4102	4102	4104

34	Vicuña[ab]		4101	4105	4105	4105	4106
35	Paihuano	4101	4101	4106	4106	4106	4105
36	Illapel	4201	4201	4301	4301	4301	4201
37	Canela	4201	4201	4304	4304	4304	4202
38	Los Vilos	4201	4201	4303	4303	4303	4203
39	Salamanca	4201	4201	4302	4302	4302	4204
40	Ovalle	4301	4301	4201	4201	4201	4301
41	Río Hurtado[ab]		4301	4202	4202	4202	4305
42	Monte Patria[ab]		4301	4203	4203	4203	4303
43	Combarbalá	4301	4301	4204	4204	4204	4302
44	Punitaqui[ab]		4301	4205	4205	4205	4304
45	Valparaíso	5108	5108	5501	5501	5501	5101
46	Casablanca	5108	5108	5507	5507	5507	5102
47	Puchuncaví	5108	5108	5504	5504	5504	5105
48	Quilpué	5108	5108	5505	5505	5505	5106
49	Quintero	5108	5108	5503	5503	5503	5107
50	Villa Alemana	5108	5108	5506	5506	5506	5108
51	Viña del Mar	5108	5108	5502	5502	5502	5109
52	Concón[ab(1995)]		5108	5509	5509	5509	5103
53	Los Andes	5701	5701	5201	5201	5201	5301
54	Calle Larga	5701	5701	5203	5203	5203	5302
55	Rinconada	5701	5701	5204	5204	5204	5303
56	San Esteban	5701	5701	5202	5202	5202	5304
57	La Ligua	5401	5401	5101	5101	5101	5401
58	Cabildo	5402	5402	5103	5103	5103	5402
59	Papudo	5401	5401	5105		5105	5403
60	Petorca	5402	5402	5102	5102	5102	5404
61	Zapallar	5401	5401	5104		5104	5405
62	Quillota	5501	5501	5401	5401	5401	5501
63	Calera	5501	5501	5403	5403	5403	5502
64	Hijuelas	5501	5501	5405	5405	5405	5503
65	La Cruz	5501	5501	5402		5402	5504
66	Limache	5108	5108	5406	5406	5406	5505
67	Nogales	5501	5501	5404	5404	5404	5506
68	Olmué	5108	5108	5407	5407	5407	5507
69	San Antonio	5601	5601	5601	5601	5601	5601
70	Algarrobo	5601	5601	5605		5605	5602
71	Cartagena	5601	5601	5602	5602	5602	5603
72	El Quisco	5601	5601	5604	5604	5604	5604
73	El Tabo	5601	5601	5603	5603	5603	5605
74	Santo Domingo	5601	5601	5606		5606	5606

75	San Felipe	5701	5701	5301	5301	5301	5701
76	Catemu	5701	5701	5306	5306	5306	5702
77	Llaillay	5701	5701	5305	5305	5305	5703
78	Panquehue	5701	5701	5304	5304	5304	5704
79	Putaendo	5701	5701	5302	5302	5302	5705
80	Santa María	5701	5701	5303	5303	5303	5706
81	Rancagua[d]	6101	6101/6112	6101	6101	6101	6101
82	Codegua[d]	6101	6101/6112		6104		6102
83	Coinco[d]	6101	6101/6112				6103
84	Doñihue[d]	6101	6101/6112	6116	6116	6116	6105
85	Graneros[d]	6101	6101/6112	6102	6102	6102	6106
86	Las Cabras[e]	6106	6106				6107
87	Machalí[d]	6101	6101/6112	6105	6105	6105	6108
88	Mostazal[d]	6101	6101/6112	6103	6103	6103	6110
89	Olivar[d]	6101	6101/6112	6106	6106	6106	6111
90	Requinoa[acd]		6101/6112	6107	6107	6107	6116
91	Peumo[e]	6106	6106				6112
92	Pichidegua[d]	6112	6101/6112	6112	6112	6112	6113
93	Rengo[d]	6112	6101/6112	6108	6108	6108	6115
94	Malloa[acd]		6101/6112		6109		6109
95	Quinta de Tilcoco[acd]		6101/6112	6110	6110	6110	6114
96	San Vicente[d]	6112	6101/6112	6111	6111	6111	6117
97	Coltauco[acd]		6101/6112	6114	6114	6114	6104
98	Pichilemu	6201	6201	6301	6301	6301	6201
99	La Estrella	6304	6301	6304	6304	6304	6202
100	Litueche	6201	6201		6303		6203
101	Marchihue	6304	6301		6305		6204
102	Paredones[ab]		6201		6306		6206
103	Navidad	6201	6201		6302		6205
104	San Fernando[d]	6301	6301/6304/6307	6201	6201	6201	6301
105	Chimbarongo[d]	6301	6301/6304/6307	6202	6202	6202	6303
106	Lolol[d]	6307	6301/6304/6307	6207	6207	6207	6304
107	Peralillo[d]	6304	6301/6304/6307	6210	6210	6210	6307
108	Placilla[d]	6307	6301/6304/6307		6203		6308
109	Nancagua[acd]		6301/6304/6307	6204	6204	6204	6305
110	Palmilla[acd]		6301/6304/6307				6306
111	Chépica[acd]		6301/6304/6307	6205	6205	6205	6302
112	Pumanque[d]	6304	6301/6304/6307				6309
113	Santa Cruz[d]	6307	6301/6304/6307	6206	6206	6206	6310
114	Talca	7101	7101	7201	7201	7201	7101
115	Constitución	7102	7102	7208	7208	7208	7102

116	Curepto	7103	7103	7209	7209	7209	7103
117	San Rafael[ab(1995)]		7101		7210	7210	7110
118	Empedrado	7102	7102		7206	7206	7104
119	Maule	7101	7101		7205	7205	7105
120	Pelarco	7101	7101	7202	7202	7202	7106
121	Pencahue	7101	7101		7207	7207	7107
122	Río Claro	7301	7301		7203	7203	7108
123	San Clemente	7101	7101	7204	7204	7204	7109
124	Cauquenes	7201	7201	7401	7401	7401	7201
125	Chanco	7102	7102		7403	7403	7202
126	Pelluhue	7201	7201	7402	7402	7402	7203
127	Curicó	7301	7301	7101	7101	7101	7301
128	Hualañé	7103	7103		7106	7106	7302
129	Licantén	7103	7103		7107	7107	7303
130	Molina	7301	7301	7104	7104	7104	7304
131	Rauco	7301	7301		7109	7109	7305
132	Romeral	7301	7301	7103	7103	7103	7306
133	Sagrada Familia	7301	7301	7105	7105	7105	7307
134	Teno	7301	7301	7102	7102	7102	7308
135	Vichuquén	7103	7103		7108	7108	7309
136	Linares	7401	7401	7301	7301	7301	7401
137	Colbún	7401	7401	7303	7303	7303	7402
138	Longaví	7401	7401	7304	7304	7304	7403
139	Parral	7404	7404	7305	7305	7305	7404
140	Retiro	7404	7404		7306	7306	7405
141	San Javier	7406	7406	7308	7308	7308	7406
142	Villa Alegre	7406	7406	7307	7307	7307	7407
143	Yerbas Buenas	7401	7401		7302	7302	7408
144	Concepción	8101	8101	8301	8301	8301	8101
145	Coronel	8101	8101	8309	8309	8309	8102
146	La Florida	8101	8101		8305	8305	8104
147	Hualqui	8101	8101		8306	8306	8105
148	Santa Juana[ab]		8101	8307	8307	8307	8109
149	Lota	8101	8101	8308	8308	8308	8106
150	Penco	8101	8101	8303	8303	8303	8107
151	Talcahuano	8101	8101	8302	8302	8302	8110
152	Tomé	8101	8101	8304	8304	8304	8111
153	Hualpén[ab(2004)]		8101				8112
154	San Pedro de la Paz[ab(1995)]		8101	8310	8310	8310	8108
155	Chiguayante[ab(1996)]		8101	8311	8311	8311	8103
156	Lebu	8202	8202	8401	8401	8401	8201

157	Arauco	8202	8202	8402	8402	8402	8202
158	Cañete	8203	8203	8405	8405	8405	8203
159	Contulmo[ab]		8203	8406	8406	8406	8204
160	Curanilahue	8202	8202	8403	8403	8403	8205
161	Los Alamos	8202	8202		8404	8404	8206
162	Tirua	8203	8203		8407	8407	8207
163	Los Angeles	8301	8301	8201	8201	8201	8301
164	Antuco	8301	8301		8204	8204	8302
165	Mulchén	8301	8301	8208	8208	8208	8305
166	Nacimiento	8301	8301	8210	8210	8210	8306
167	Laja[ab]		8301	8211	8211	8211	8304
168	Negrete	8301	8301	8209	8209	8209	8307
169	Quilaco	8301	8301	8207	8207	8207	8308
170	Quilleco	8301	8301		8205	8205	8309
171	San Rosendo	8301	8301		8212	8212	8310
172	Santa Bárbara	8301	8301		8206	8206	8311
173	Alto Biobío[ab(2004)]		8301				8314
174	Tucapel	8416	8416		8203	8203	8312
175	Yumbel	8401	8401		8213	8213	8313
176	Chillán	8401	8401	8101	8101	8101	8401
177	Bulnes	8401	8401		8111	8111	8402
178	Cobquecura	8404	8404		8117	8117	8403
179	Coelemu	8404	8404		8115	8115	8404
180	El Carmen	8401	8401	8108	8108	8108	8407
181	Ninhue	8401	8401		8119	8119	8408
182	San Nicolás[ab]		8401		8120	8120	8419
183	Chillán Viejo[ab(1995)]		8401	8121	8121	8121	8406
184	Cabrero[ab]		8401		8202	8202	8303
185	Ñiquén	8401	8401		8103	8103	8409
186	Pemuco	8401	8401		8110	8110	8410
187	Quillón[ab]		8401		8112	8112	8413
188	Pinto	8401	8401		8106	8106	8411
189	Quirihue	8404	8404	8118	8118	8118	8414
190	Ránquil	8401	8401		8113	8113	8415
191	Portezuelo[ab]		8401		8114	8114	8412
192	San Carlos	8401	8401	8102	8102	8102	8416
193	San Fabián	7404	7404		8104	8104	8417
194	Coihueco[ab]		8401	8105	8105	8105	8405
195	San Ignacio	8401	8401		8107	8107	8418
196	Treguaco	8404	8404	8116	8116	8116	8420
197	Yungay	8416	8416	8109	8109	8109	8421

198	Temuco	9101	9101	9201	9201	9201	9101
199	Carahue	9102	9102	9217	9217	9217	9102
200	Cunco	9101	9101		9205	9205	9103
201	Melipeuco[ab]		9101		9206	9206	9110
202	Curarrehue	9117	9117	9207	9207	9207	9104
203	Freire	9101	9101	9210	9210	9210	9105
204	Galvarino	9210	9210		9219	9219	9106
205	Padre Las Casas[ab(1995)]		9101	9220	9220	9220	9112
206	Cholchol[ab(2004)]		9101				9121
207	Gorbea	9101	9101	9212	9212	9212	9107
208	Lautaro	9101	9101	9202	9202	9202	9108
209	Loncoche	9117	9117	9213	9213	9213	9109
210	Toltén[ab]		9101		9214	9214	9118
211	Nueva Imperial	9101	9101	9218	9218	9218	9111
212	Perquenco	9101	9101		9203	9203	9113
213	Pitrufquén	9101	9101	9211	9211	9211	9114
214	Pucón	9117	9117	9208	9208	9208	9115
215	Saavedra	9102	9102		9216	9216	9116
216	Teodoro Schmidt	9101	9101	9215	9215	9215	9117
217	Vilcún	9101	9101	9204	9204	9204	9119
218	Villarrica	9117	9117	9209	9209	9209	9120
219	Angol	9201	9201	9101	9101	9101	9201
220	Collipulli	9201	9201	9103	9103	9103	9202
221	CuraCautín	9203	9203	9105	9105	9105	9203
222	Ercilla	9211	9211		9106	9106	9204
223	Lonquimay	9203	9203	9104	9104	9104	9205
224	Los Sauces	9201	9201	9111	9111	9111	9206
225	Lumaco	9210	9210		9109	9109	9207
226	Purén	9210	9210	9110	9110	9110	9208
227	Renaico	9201	9201		9102	9102	9209
228	Traiguén	9210	9210	9108	9108	9108	9210
229	Victoria	9211	9211	9107	9107	9107	9211
230	Puerto Montt	10101	10101	10301	10301	10301	10101
231	Calbuco	10101	10101		10304	10304	10102
232	Fresia	10101	10101		10307	10307	10104
233	Frutillar	10303	10303	10309	10309	10309	10105
234	Los Muermos	10101	10101	10306	10306	10306	10106
235	Llanquihue	10101	10101			10308	10107
236	Maullín	10101	10101	10305	10305	10305	10108
237	Puerto Varas	10101	10101	10302	10302	10302	10109
238	Cochamó[ab]		10101		10303	10303	10103

239	Castro[e]	10201	10201		10401	10401	10201
240	Ancud[d]	10202	10202/10205	10402	10402	10402	10202
241	Quemchi[acd]		10202/10205		10403	10403	10209
242	Chonchi[e]	10201	10201		10408	10408	10203
243	Curaco de Vélez[d]	10205	10202/10205	10405	10405	10405	10204
244	Dalcahue[d]	10205	10202/10205		10404	10404	10205
245	Puqueldón[e]	10201	10201			10407	10206
246	Queilén[e]	10201	10201			10409	10207
247	Quellón[e]	10208	10208			10410	10208
248	Quinchao[d]	10205	10202/10205		10406	10406	10210
249	Osorno	10301	10301	10201	10201	10201	10301
250	Puerto Octay	10301	10301		10204	10204	10302
251	Purranque	10303	10303	10205	10205	10205	10303
252	Puyehue	10301	10301			10203	10304
253	Río Negro	10301	10301	10206	10206	10206	10305
254	San Juan de la Costa	10301	10301	10207	10207	10207	10306
255	San Pablo	10301	10301		10202	10202	10307
256	Chaitén[e]	10401	10401			10501	10401
257	Futaleufú[e]	10401	10401				10402
258	Hualaihué[e]	10401	10401		10502	10502	10403
259	Palena[e]	10401	10401				10404
260	Valdivia	10501	10501	10101	10101	10101	10501
261	Corral	10501	10501			10106	10502
262	Futrono	10504	10504	10105	10105	10105	10503
263	La Unión	10504	10504	10109	10109	10109	10504
264	Lago Ranco	10504	10504		10112	10112	10505
265	Lanco[e]	10510	10510		10103	10103	10506
266	Los Lagos	10501	10501	10104	10104	10104	10507
267	Máfil	10501	10501			10107	10508
268	Mariquina[e]	10510	10510			10102	10509
269	Panguipulli[e]	10510	10510		10108	10108	10511
270	Paillaco[ab]		10504			10110	10510
271	Río Bueno	10504	10504	10111	10111	10111	10512
272	Lago Verde	11101	11101				
273	Coyhaique	11101	11101	11101	11101	11101	11101
274	Aysén	11101	11101	11201	11201	11201	11201
275	Cisnes	11101	11101	11202	11202	11202	11202
276	Guaitecas[e]	10208	10208				
277	Cochrane	11101	11101	11401	11401	11401	11301
278	O'Higgins	12401	12401				
279	Tortel	11101	11101				

280	Chile Chico	11101	11101				11401
281	Río Ibánez	11101	11101	11302	11302	11302	11402
282	Punta Arenas	12101	12101	12201	12201	12201	12101
283	Laguna Blanca	12101	12101				
284	Río Verde	12101	12101				
285	San Gregorio	12101	12101				12104
286	Cabo de Hornos	12101	12101				12201
287	Porvenir	12101	12101	12301	12301	12301	12301
288	Primavera	12101	12101				12302
289	Timaukel	12101	12101				
290	Natales	12401	12401	12101	12101	12101	12401
291	Torres del Paine	12401	12401				
292	Santiago	13101	13101	13101	13101	13101	13101
293	Cerro Navia	13101	13101	13130	13130	13130	13103
294	Conchalí	13101	13101	13103	13103	13103	13104
295	El Bosque	13101	13101	13121	13121	13121	13105
296	Huechuraba	13101	13101	13104	13104	13104	13107
297	Independencia	13101	13101	13102	13102	13102	13108
298	La Cisterna	13101	13101	13120	13120	13120	13109
299	La Florida	13101	13101	13114	13114	13114	13110
300	La Granja	13101	13101	13116	13116	13116	13111
301	La Pintana	13101	13101	13117	13117	13117	13112
302	La Reina	13101	13101	13111	13111	13111	13113
303	Las Condes	13101	13101	13109	13109	13109	13114
304	Lo Barnechea	13101	13101	13108	13108	13108	13115
305	Lo Prado	13101	13101	13128	13128	13128	13117
306	Macul	13101	13101	13112	13112	13112	13118
307	Maipú	13101	13101	13126	13126	13126	13119
308	Ñuñoa	13101	13101	13110	13110	13110	13120
309	Pedro Aguirre Cerda	13101	13101	13122	13122	13122	13121
310	Lo Espejo[ab]		13101	13123	13123	13123	13116
311	Estación Central[ab]		13101	13124	13124	13124	13106
312	Cerrillos[ab]		13101	13125	13125	13125	13102
313	Peñalolén	13101	13101	13113	13113	13113	13122
314	Providencia	13101	13101	13106	13106	13106	13123
315	Pudahuel	13101	13101	13129	13129	13129	13124
316	Quilicura	13101	13101	13132	13132	13132	13125
317	Quinta Normal	13101	13101	13127	13127	13127	13126
318	Recoleta	13101	13101	13105	13105	13105	13127
319	Renca	13101	13101	13131	13131	13131	13128
320	San Joaquín	13101	13101	13115	13115	13115	13129

321	San Miguel	13101	13101	13119	13119	13119	13130
322	San Ramón	13101	13101	13118	13118	13118	13131
323	Vitacura	13101	13101	13107	13107	13107	13132
324	Puente Alto	13101	13101	13301	13301	13301	13201
325	Pirque	13101	13101	13303	13303	13303	13202
326	San José De Maipo	13101	13101	13302	13302	13302	13203
327	Colina	13101	13101	13201	13201	13201	13301
328	Lampa	13101	13101	13202	13202	13202	13302
329	Tiltil	13101	13101	13203	13203	13203	13303
330	San Bernardo	13101	13101	13401	13401	13401	13401
331	Buin	13101	13101	13402	13402	13402	13402
332	Calera De Tango	13101	13101	13404	13404	13404	13403
333	Paine	13101	13101	13403	13403	13403	13404
334	Melipilla	13501	13501	13501	13501	13501	13501
335	Alhué	13501	13501	13504	13504	13504	13502
336	Curacaví	13101	13101	13503	13503	13503	13503
337	María Pinto	13501	13501	13502	13502	13502	13504
338	San Pedro	13501	13501	13505	13505	13505	13505
339	Talagante	13101	13101	13601	13601	13601	13601
340	El Monte	13101	13101	13604	13604	13604	13602
341	Isla De Maipo	13101	13101	13603	13603	13603	13603
342	Peñaflor	13101	13101	13602	13602	13602	13605
343	Isla de Pascua[e]	5201	5201				
344	Juan Fernández[e]	5103	5103				
345	Antártica[e]	12202	12202				
346	Padre Hurtado[ab(1994)]		13101	13605	13605	13605	13604

Source: The original FLMA codes were sourced from https://geodacenter.github.io/data-and-lab//FLMA/, accessed on September 27, 2024. The correction and correspondence are based on Instituto Nacional de Estadísticas (2008), the Library of the National Congress of Chile (https://www.bcn.cl/portal/, accessed on January 23, 2025), and the National Socioeconomic Characterization Survey (*Encuesta de Caracterización Socioeconómica Nacional*; CASEN).
Note: 'a' indicates that the commune was not included in the original FLMA code. 'b' indicates that the commune became independent from another commune whose FLMA code was uniquely identified (the year of creation is presented in parentheses) or was adjacent to other communes that were geographically contiguous and shared the same FLMA code. 'c' indicates that the FLMA code of the commune was not uniquely identified, and that the commune was assigned multiple FLMA codes. 'd' indicates that multiple FLMA codes of the communes were aggregated into one new code. 'e' indicates that none of the communes consisting of a given FLMA code was covered by the 1998 CASEN survey. The blank area shows that the commune was not included in the original FLMA codes or not covered by the CASEN survey for a given year.

Table A2 Correspondence between the classifications of the Chilean input-output (I-O) tables for 1996 and 1986 and the International Standard Industrial Classification (ISIC) Revisions 2 and applied tariff rates by industry.

				Output tariff rates			Input tariff rates		
I-O 1996 code	Industry name	I-O1986 code	ISIC Rev2	1999	2002	2005	1999	2002	2005
1/2/3	Agriculture products/ Fruit/ Live animals and animal products	1/2/3	111/113	0.0919	0.0317	0.0127	0.0634	0.0295	0.0124
4	Forestry products	5	12	0.0624	0.0439	0.0145	0.0397	0.0227	0.0088
5	Fish and other fishing products	6	13	0.0884	0.0619	0.0306	0.0774	0.0398	0.0193
6	Coal	10	21	0.0499	0.0203	0.0222	0.0207	0.0156	0.0051
7	Crude petroleum and natural gas	9	22	0.0499	0.0203	0.0222	0.0353	0.0196	0.0123
8	Iron	8	2301	0.0398	0.0221	0.0025	0.0323	0.0238	0.0084
9	Copper	7	2302	0.0398	0.0221	0.0025	0.0289	0.0194	0.0050
10	Other minerals	11/12	29	0.0398	0.0221	0.0025	0.0256	0.0181	0.0057
11	Meat and meat products	13	3111	0.1409	0.0515	0.0303	0.0837	0.0301	0.0130
12	Prepared and preserved fish	16	3114	0.1409	0.0515	0.0303	0.0720	0.0459	0.0222
13	Prepared and preserved fruit and vegetables	15	3113	0.1409	0.0515	0.0303	0.0673	0.0284	0.0117
14	Animal and vegetable oil	17	3115	0.1409	0.0515	0.0303	0.0898	0.0398	0.0207
15	Milk and milk products	14	3112	0.1409	0.0515	0.0303	0.0719	0.0289	0.0122
16	Grain milled products	18	3116	0.1409	0.0515	0.0303	0.0744	0.0270	0.0113
17	Prepared animal feeds	21	3122	0.1409	0.0515	0.0303	0.1042	0.0391	0.0203
18	Bakery products	18	3117	0.1409	0.0515	0.0303	0.0909	0.0360	0.0190

19	Sugar	19	3118/ 3121	0.1409	0.0515	0.0303	0.0733	0.0281	0.0111
20	Other food products	20	3119	0.1409	0.0515	0.0303	0.0664	0.0289	0.0129
21	Alcoholic beverages	23	3131	0.0611	0.0452	0.0200	0.0497	0.0235	0.0097
22	Wine	23	3132	0.0611	0.0452	0.0200	0.0543	0.0295	0.0114
23	Beer	22	3133	0.0611	0.0452	0.0200	0.0388	0.0215	0.0092
24	Non-alcoholic beverages	22	3134	0.0611	0.0452	0.0200	0.0855	0.0352	0.0185
25	Tobacco products	24	314	0.0611	0.0452	0.0200	0.0402	0.0248	0.0096
26	Textiles	25	321	0.0797	0.0606	0.0442	0.0544	0.0407	0.0247
27	Wearing	26	322	0.0797	0.0606	0.0442	0.0493	0.0370	0.0242
28	Leather and leather products	27	323	0.0815	0.0640	0.0461	0.0652	0.0389	0.0226
29	Footwear	28	324	0.0815	0.0640	0.0461	0.0516	0.0378	0.0231
30	Wood and wood products	29	331	0.0720	0.0543	0.0081	0.0335	0.0241	0.0072
31	Paper and paper products	31	341	0.0525	0.0349	0.0037	0.0331	0.0234	0.0057
32	Printed matter and related articles	32	342	0.0245	0.0223	0.0094	0.0322	0.0224	0.0044
33	Refined petroleum products	35	353/354	0.0720	0.0506	0.0155	0.0459	0.0202	0.0194
34	Basic chemicals	33	351	0.0570	0.0431	0.0124	0.0378	0.0252	0.0095
35	Other chemical products	34	352	0.0693	0.0512	0.0192	0.0392	0.0275	0.0095
36	Rubber products	36	355	0.0720	0.0506	0.0155	0.0492	0.0358	0.0141
37	Plastic products	37	356	0.0720	0.0506	0.0155	0.0448	0.0330	0.0106
38	Glass and glass products	39	362	0.0652	0.0486	0.0230	0.0397	0.0284	0.0103
39	Other non-metallic mineral products	38/40	361/369	0.0652	0.0486	0.0230	0.0373	0.0260	0.0093
40	Basic iron and steel products	41	371	0.0524	0.0404	0.0121	0.0338	0.0228	0.0084

41	Basic non-ferrous products	41	372	0.0524	0.0404	0.0121	0.0393	0.0267	0.0071
42	Metal products	42	381	0.0745	0.0546	0.0236	0.0413	0.0310	0.0102
43	Non-electric machinery and equipment	43	382	0.0620	0.0485	0.0107	0.0437	0.0329	0.0113
44	Electric machinery and equipment	44/46	383/385	0.0745	0.0546	0.0236	0.0407	0.0294	0.0101
45	Transport equipment	45	384	0.0727	0.0583	0.0169	0.0497	0.0388	0.0119
46	Furniture	30	332	0.0696	0.0516	0.0362	0.0440	0.0329	0.0112
47	Other manufacturing products	47	390	0.0779	0.0629	0.0452	0.0429	0.0307	0.0135
48	Electricity	48	4101				0.0125	0.0075	0.0042
49	Gas	49	4102/4103				0.0390	0.0243	0.0125
50	Water	50	42				0.0214	0.0157	0.0054
51	Construction	51	50				0.0508	0.0375	0.0141
52	Trade services	52/73	61/62/951				0.0174	0.0121	0.0042
53	Hotels services	54	632				0.0435	0.0215	0.0113
54	Restaurants services	53	631				0.0768	0.0325	0.0173
55	Railway transport services	55	7111				0.0288	0.0218	0.0068
56	Other road passenger transport services	57	7112/7113				0.0459	0.0340	0.0105
57	Road freight transport services	56	7114/7115/7116				0.0376	0.0269	0.0085
58	Sea transport services	58	712				0.0113	0.0080	0.0026
59	Air transport services	59	713				0.0197	0.0143	0.0045
60	Services related to transport	60	719				0.0103	0.0075	0.0031
61	Communication services	61	72				0.0064	0.0048	0.0020

62	Financial services	62	81				0.0081	0.0057	0.0021
63	Insurance services	63	82				0.0043	0.0034	0.0017
65	Business services	4/65	112/832/833				0.0140	0.0104	0.0041
64/66	Real state services/ Housing	64/66	831				0.0068	0.0044	0.0019
67	Public administration	75	91				0.0238	0.0165	0.0061
68/69/70/71	Public educational services/Private educational services/ Public health services/ Private health services	67/68/69/70	92/93				0.0313	0.0191	0.0083
72	Recreational, cultural and sporting services	71/72	94				0.0137	0.0093	0.0041
73	Other community, social and personal services	74	952/953/959/960				0.0293	0.0179	0.0076
	Weighted average of traded sectors (1-47)			0.0691	0.0465	0.0187			

Source: Authors' own elaboration based on Venegas Morales (1994, p. 87), Annex 1 of the Central Bank of Chile (2001, p. 207), and Annex 4 of Becerra (2006, pp. 21, 23, 26).

Note: The industry names were based on Table III. 3 of the Central Bank of Chile (2001, pp. 215–216). The correspondence between the classification of the I-O table for 1986 and the ISIC Revision 2 was based on Venegas Morales (1994, p. 87), while the correspondence between the classifications of the I-O tables for 1986 and 1996 was based on Annex 1 of the Central Bank of Chile (2001, p. 207). We used the data on the output tariff rates from the first quarter of 2000 for 1999. We assigned the output tariff rates of non-traded sectors (codes 48–73) to zero. As Becerra (2006) classified industries by the two-or three-digit level of the ISIC Revision 2, more disaggregated industries were assigned identical output tariff rates among them for a given year. The corresponding import values were used as the weights for the calculation of the weighted average.

Table A3 Input tariff rates by functional labor market areas (FLMAs).

FLMA	1999	2002	2005
1101	0.0337	0.0218	0.0085
1201	0.0362	0.0223	0.0089
2101	0.0320	0.0209	0.0078
2201	0.0329	0.0220	0.0085
2301	0.0309	0.0201	0.0076
3101	0.0351	0.0209	0.0081
3202	0.0327	0.0210	0.0075
3301	0.0352	0.0214	0.0081
4101	0.0383	0.0229	0.0094
4201	0.0447	0.0258	0.0105
4301	0.0451	0.0246	0.0101
5108	0.0316	0.0201	0.0081
5401	0.0429	0.0258	0.0114
5402	0.0334	0.0200	0.0078
5501	0.0393	0.0228	0.0090
5601	0.0378	0.0232	0.0093
5701	0.0408	0.0233	0.0093
6101/6112	0.0409	0.0228	0.0091
6201	0.0420	0.0241	0.0104
6301/6304/6307	0.0405	0.0224	0.0091
7101	0.0383	0.0226	0.0091
7102	0.0365	0.0224	0.0085
7103	0.0545	0.0278	0.0115
7201	0.0447	0.0257	0.0103
7301	0.0442	0.0240	0.0098
7401	0.0386	0.0220	0.0089
7404	0.0436	0.0239	0.0098
7406	0.0455	0.0246	0.0103
8101	0.0358	0.0226	0.0092
8202	0.0361	0.0223	0.0087
8203	0.0493	0.0256	0.0104
8301	0.0400	0.0233	0.0092
8401	0.0388	0.0221	0.0089
8404	0.0416	0.0233	0.0092
8416	0.0359	0.0241	0.0088
9101	0.0393	0.0230	0.0093
9102	0.0458	0.0245	0.0098
9117	0.0449	0.0254	0.0105
9201	0.0432	0.0239	0.0096
9203	0.0363	0.0215	0.0083
9210	0.0353	0.0218	0.0084
9211	0.0390	0.0222	0.0087
10101	0.0408	0.0235	0.0097

10202/10205	0.0477	0.0269	0.0116
10301	0.0388	0.0225	0.0090
10303	0.0424	0.0244	0.0100
10501	0.0348	0.0213	0.0083
10504	0.0462	0.0251	0.0101
11101	0.0399	0.0244	0.0100
12101	0.0343	0.0212	0.0088
12401	0.0433	0.0250	0.0107
13101	0.0327	0.0209	0.0085
13501	0.0405	0.0225	0.0092
Weighted average	0.0358	0.0219	0.0088

Source: Authors' own elaboration based on sources presented in Tables A1 and A2 in the Supplemental material and the National Socioeconomic Characterization Survey (*Encuesta de Caracterización Socioeconómica Nacional*; CASEN) for 1998.
Note: The employment share of each FLMA in 1998 was used as the weights for the calculation of the weighted average.

Table A4 Unemployment rates by functional labor market areas (FLMAs).

FLMA	2000	2003	2006
1101	0.1052	0.0877	0.1001
1201	0.1257	0.1239	0.0881
2101	0.1210	0.0894	0.0534
2201	0.1116	0.0635	0.0822
2301	0.0916	0.1262	0.0986
3101	0.1211	0.0928	0.0586
3202	0.0798	0.0866	0.1052
3301	0.1096	0.1278	0.0722
4101	0.1182	0.0911	0.0757
4201	0.1372	0.1476	0.0794
4301	0.0862	0.0699	0.0580
5108	0.1147	0.1410	0.0924
5401	0.0799	0.0888	0.0526
5402	0.0847	0.0364	0.0539
5501	0.1291	0.1073	0.0707
5601	0.1525	0.1118	0.1010
5701	0.1167	0.0838	0.0625
6101/6112	0.0878	0.0832	0.0681
6201	0.0647	0.0556	0.0609
6301/6304/6307	0.0683	0.0749	0.0594
7101	0.0755	0.1247	0.0653
7102	0.0743	0.0699	0.0776
7103	0.1108	0.1054	0.0911
7201	0.0972	0.0727	0.0543
7301	0.0677	0.0790	0.0604
7401	0.1041	0.0658	0.0854
7404	0.0834	0.1054	0.0581
7406	0.1266	0.1074	0.0872
8101	0.1283	0.1130	0.1056
8202	0.1164	0.1063	0.1187
8203	0.1254	0.1387	0.0880
8301	0.1181	0.0893	0.1045
8401	0.1263	0.1210	0.0870
8404	0.0846	0.0905	0.0630
8416	0.1452	0.1134	0.1049
9101	0.1182	0.1162	0.0709
9102	0.1131	0.0878	0.0715
9117	0.1286	0.0910	0.0714
9201	0.1047	0.0978	0.0846
9203	0.1517	0.1481	0.1143
9210	0.0903	0.1151	0.0984
9211	0.1207	0.1197	0.1306
10101	0.0782	0.0843	0.0388

10202/10205	0.0366	0.0394	0.0228
10301	0.2208	0.0996	0.0856
10303	0.0884	0.0923	0.0661
10501	0.1113	0.1036	0.0854
10504	0.1240	0.1055	0.0826
11101	0.0546	0.0792	0.0276
12101	0.0561	0.0691	0.0509
12401	0.0522	0.0673	0.0365
13101	0.0999	0.0954	0.0713
13501	0.0709	0.0577	0.0490
Weighted average	0.1054	0.0990	0.0750

Source: Authors' calculations based on the data sources presented in Section 4 in the main text.
Note: The expansion weights were used for the calculations. Additionally, the employment share of each FLMA in 1998 is used as the weights for the calculation of the weighted average.

Table A5 Descriptive statistics of variables to estimate Equation (36) for each year.

	2000	2003	2006
Observations	46,474	48,316	57,041
Log hourly wage	7.0723	7.0617	7.1165
Years of education	11.3150	11.3987	11.3727
Experience	26.2115	26.0864	26.6771
Experience squared	847.6509	836.5488	882.8377
Head of household	0.4821	0.4856	0.4615
Married	0.4847	0.4896	0.4440
Urban	0.8972	0.8997	0.8955
Formal	0.6712	0.6740	0.6471
Male	0.6390	0.6366	0.6401
FLMA			
1101	0.0148	0.0134	0.0121
1201	0.0112	0.0106	0.0094
2101	0.0190	0.0207	0.0234
2201	0.0097	0.0096	0.0085
2301	0.0018	0.0013	0.0017
3101	0.0107	0.0105	0.0117
3202	0.0021	0.0020	0.0015
3301	0.0040	0.0038	0.0039
4101	0.0235	0.0227	0.0261
4201	0.0034	0.0035	0.0040
4301	0.0084	0.0100	0.0094
5108	0.0577	0.0539	0.0591
5401	0.0017	0.0025	0.0028
5402	0.0017	0.0020	0.0018
5501	0.0098	0.0104	0.0121
5601	0.0078	0.0067	0.0076
5701	0.0147	0.0164	0.0174
6101/6112	0.0392	0.0434	0.0401
6201	0.0016	0.0007	0.0014
6301/6304/6307	0.0144	0.0161	0.0151
7101	0.0179	0.0167	0.0188
7102	0.0033	0.0036	0.0035
7103	0.0020	0.0013	0.0014
7201	0.0024	0.0023	0.0020
7301	0.0175	0.0166	0.0180
7401	0.0078	0.0081	0.0083
7404	0.0034	0.0025	0.0026
7406	0.0028	0.0030	0.0029
8101	0.0580	0.0569	0.0565
8202	0.0066	0.0059	0.0051
8203	0.0018	0.0017	0.0020
8301	0.0146	0.0166	0.0161

8401	0.0240	0.0214	0.0219
8404	0.0017	0.0017	0.0018
8416	0.0016	0.0016	0.0014
9101	0.0266	0.0254	0.0293
9102	0.0010	0.0008	0.0009
9117	0.0043	0.0046	0.0050
9201	0.0044	0.0045	0.0046
9203	0.0010	0.0009	0.0010
9210	0.0022	0.0025	0.0018
9211	0.0020	0.0022	0.0021
10101	0.0184	0.0183	0.0227
10202/10205	0.0037	0.0037	0.0039
10301	0.0130	0.0116	0.0118
10303	0.0024	0.0021	0.0022
10501	0.0138	0.0104	0.0103
10504	0.0048	0.0050	0.0055
11101	0.0059	0.0059	0.0054
12101	0.0088	0.0076	0.0078
12401	0.0012	0.0010	0.0011
13101	0.4552	0.4642	0.4450
13501	0.0086	0.0092	0.0082

Source: Authors' calculations based on the data sources presented in Section 4 in the main text.
Note: The expansion weights were used for the calculations. FLMA: Functional labor market areas.

Table A6 Migration and commuting in Chile for 2006 and 2009.

	2006	2009
Moved outside the FLMA	0.0381	0.0340
Commute outside FLMA		0.0379
Moved outside the province	0.0498	0.0427
Commute outside province		0.0893

Source: Authors' calculations based on the National Socioeconomic Characterization Survey (*Encuesta de Caracterización Socioeconómica Nacional*; CASEN) for 2006 and 2009.
Note: The expansion weights were used for the calculations. The migration status for the 2006 survey was based on places of residence as of April 2002, while that for the 2009 survey was based on places of residence as of November 2004. The 2006 CASEN survey did not provide information on commuting.
FLMA: Functional labor market areas.

Table A7 Estimation results of Equation (35) for 2000, 2003, and 2006.

	2000	2003	2006
Years of education	0.1152***	0.1123***	0.1063***
	(0.0009)	(0.0008)	(0.0008)
Experience	0.0093***	0.0075***	0.0048***
	(0.0009)	(0.0008)	(0.0007)
Experience squared	0.0000**	0.0001***	0.0001***
	(0.0000)	(0.0000)	(0.0000)
Head of household	0.1373***	0.1222***	0.1378***
	(0.0063)	(0.0058)	(0.0052)
Married	0.0904***	0.0990***	0.0989***
	(0.0055)	(0.0052)	(0.0049)
Urban	0.0168*	-0.0073	-0.0156*
	(0.0102)	(0.0094)	(0.0085)
Formal	0.2297***	0.2219***	0.1960***
	(0.0058)	(0.0054)	(0.0050)
Male	0.0769***	0.0591***	0.0790***
	(0.0067)	(0.0061)	(0.0056)
Constant	5.0703***	5.1268***	5.3621***
	(0.0275)	(0.0267)	(0.0255)
Industry fixed effects	Yes	Yes	Yes
FLMA fixed effects	Yes	Yes	Yes
Observations	46,474	48,316	57,041
R-squared	0.5325	0.5222	0.4560

Note: ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Numbers in parentheses represent standard errors. The expansion weights were used as the weights for the estimations.

Table A8 Functional labor market area (FLMA)-level local wage premiums for 2000, 2003, and 2006.

FLMA codes	2000	2003	2006
1101	-0.0159	-0.0732***	-0.0478**
	(0.0204)	(0.0199)	(0.0196)
1201	-0.2046***	-0.2250***	-0.2311***
	(0.0233)	(0.0225)	(0.0223)
2101	0.1527***	0.0578***	0.0717***
	(0.0180)	(0.0161)	(0.0142)
2201	0.1925***	0.1489***	0.1451***
	(0.0258)	(0.0239)	(0.0237)
2301	-0.1140*	-0.0296	0.0012
	(0.0582)	(0.0646)	(0.0534)
3101	-0.0340	-0.0452**	0.0149
	(0.0237)	(0.0226)	(0.0202)
3202	-0.0305	-0.0680	0.0035
	(0.0541)	(0.0522)	(0.0561)
3301	-0.1153***	-0.0056	0.0285
	(0.0394)	(0.0377)	(0.0349)
4101	-0.1077***	-0.1147***	-0.1301***
	(0.0159)	(0.0152)	(0.0133)
4201	-0.1693***	-0.1768***	-0.1077***
	(0.0420)	(0.0389)	(0.0342)
4301	-0.0999***	-0.0322	-0.0754***
	(0.0269)	(0.0233)	(0.0226)
5108	-0.0859***	-0.1154***	-0.1135***
	(0.0101)	(0.0098)	(0.0087)
5401	-0.1608***	-0.1496***	-0.0366
	(0.0587)	(0.0463)	(0.0409)
5402	-0.1123*	-0.1088**	-0.0635
	(0.0595)	(0.0515)	(0.0505)
5501	-0.0705***	-0.1118***	-0.1049***
	(0.0247)	(0.0226)	(0.0196)
5601	-0.2034***	-0.1382***	-0.1022***
	(0.0278)	(0.0283)	(0.0248)
5701	-0.1244***	-0.1084***	-0.0628***
	(0.0202)	(0.0180)	(0.0164)
6101	-0.0476***	-0.0085	0.0373***
	(0.0124)	(0.0111)	(0.0108)
6201	-0.0274	-0.0793	-0.1140*
	(0.0617)	(0.0876)	(0.0587)
6301	-0.0542***	-0.0929***	-0.0614***
	(0.0208)	(0.0186)	(0.0178)
7101	-0.0953***	-0.0554***	-0.1083***
	(0.0183)	(0.0178)	(0.0157)
7102	-0.1163***	0.0227	-0.1047***
	(0.0433)	(0.0389)	(0.0369)
7103	-0.0999*	-0.1032	-0.1205**
	(0.0546)	(0.0648)	(0.0574)
7201	-0.2019***	-0.1600***	-0.2396***
	(0.0504)	(0.0487)	(0.0488)
7301	-0.0549***	-0.0586***	-0.0312*
	(0.0187)	(0.0182)	(0.0163)
7401	-0.1269***	-0.1503***	-0.1300***
	(0.0279)	(0.0258)	(0.0239)
7404	-0.1326***	-0.2029***	-0.2251***
	(0.0423)	(0.0462)	(0.0422)
7406	-0.0854*	-0.1998***	-0.1397***
	(0.0469)	(0.0426)	(0.0405)
8101	-0.1094***	-0.1004***	-0.1027***
	(0.0101)	(0.0096)	(0.0090)
8202	-0.1986***	-0.1346***	-0.2179***
	(0.0309)	(0.0309)	(0.0307)
8203	-0.2048***	-0.2696***	-0.2345***
	(0.0576)	(0.0558)	(0.0489)
8301	-0.1700***	-0.1478***	-0.0888***

	(0.0205)	(0.0181)	(0.0171)
8401	-0.2502***	-0.2315***	-0.2125***
	(0.0159)	(0.0158)	(0.0146)
8404	-0.2116***	-0.1742***	-0.2455***
	(0.0600)	(0.0565)	(0.0519)
8416	-0.2287***	-0.1875***	-0.1928***
	(0.0612)	(0.0577)	(0.0573)
9101	-0.0577***	-0.1144***	-0.1247***
	(0.0149)	(0.0144)	(0.0125)
9102	-0.2452***	-0.2689***	-0.2884***
	(0.0795)	(0.0838)	(0.0717)
9117	-0.1835***	-0.0611*	-0.0886***
	(0.0374)	(0.0341)	(0.0307)
9201	-0.2107***	-0.1132***	-0.1034***
	(0.0372)	(0.0345)	(0.0320)
9203	-0.3087***	-0.2042***	-0.2497***
	(0.0776)	(0.0764)	(0.0690)
9210	-0.2783***	-0.1620***	-0.1681***
	(0.0523)	(0.0468)	(0.0516)
9211	-0.2064***	-0.1821***	-0.2563***
	(0.0542)	(0.0493)	(0.0470)
10101	-0.0776***	-0.0394**	0.0165
	(0.0183)	(0.0175)	(0.0146)
10202	-0.1669***	-0.0552	0.0070
	(0.0414)	(0.0386)	(0.0357)
10301	-0.1900***	-0.0928***	-0.1287***
	(0.0215)	(0.0214)	(0.0199)
10303	-0.0943*	-0.1765***	-0.1348***
	(0.0500)	(0.0500)	(0.0458)
10501	-0.0758***	-0.1274***	-0.1150***
	(0.0210)	(0.0226)	(0.0213)
10504	-0.1976***	-0.2140***	-0.1900***
	(0.0357)	(0.0328)	(0.0293)
11101	0.0608*	0.1101***	0.1201***
	(0.0320)	(0.0302)	(0.0294)
12101	0.3248***	0.0989***	0.1089***
	(0.0266)	(0.0267)	(0.0245)
12401	-0.0351	0.0185	0.0042
	(0.0708)	(0.0715)	(0.0638)
13101	0.1020***	0.0983***	0.0938***
	(0.0029)	(0.0027)	(0.0026)
13501	-0.0438*	-0.0267	-0.0118
	(0.0266)	(0.0242)	(0.0240)

Note: ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Numbers in parentheses represent standard errors. The local wage premiums and their standard errors were calculated using Haisken-Denew and Schmidt's (1997) two-step restricted least squares procedure. The expansion weights were used as the weights for the estimations.

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