

Migration and Monopsony

Evidence from ISMU Data 2001-2021

November 10, 2025

Descriptives

- Tables

- Graphs

- Wage Gap Estimation

Sample Size by Legal Status and Year

Year	Citizen	Regular	Irregular
2002	685	3,577	1,087
2003	1,016	4,111	290
2004	1,251	4,126	514
2005	1,381	3,782	591
2006	1,833	3,513	901
2007	2,448	3,419	677
2008	2,648	3,042	765
2009	2,565	2,671	596
2010	2,420	2,129	135
2011	2,768	2,075	121

Year	Citizen	Regular	Irregular
2012	2,354	1,686	115
2013	1,426	781	52
2014	1,491	753	54
2015	1,253	666	44
2016	1,195	540	42
2017	614	236	17
2018	617	182	18
2019	924	359	28
2020	905	328	53
2021	1,146	438	29

Wage Differences

	Cittadino o Equiparabile	Regolare	Irregolare
<i>Gender</i>			
Male	1303.84	1074.53	799.24
Female	943.76	842.38	763.68
<i>Education</i>			
Nessun titolo	1154.71	981.49	739.65
Scuola dell'obbligo	1166.82	994.37	776.61
Scuola superiore	1137.95	985.47	796.58
Laurea e simili	1201.94	1017.01	829.14
<i>Age</i>			
21–29	710.87	757.72	609.09
30–44	1038.50	926.58	755.88
45–59	1179.41	1007.95	794.09
60+	1219.92	1021.01	813.61
<i>Years Since Migration</i>			
0–2	938.41	835.32	737.30
3–10	1086.80	997.74	837.53
11–20	1205.12	1084.02	881.60
21+	1244.46	1147.61	1000.00

Table: Wage Means by Legal Status (Part 1)

Wage Differences (cont.)

	Cittadino o Equiparabile	Regolare	Irregolare
<i>Geographical Area</i>			
Subsaharan Africa	1124.90	941.66	649.90
East Asia (and pacific)	1149.79	965.71	817.36
Eastern Europe & Central Asia	1127.42	1015.88	845.37
Latin America	1040.50	933.84	788.20
Middle East & North Africa	1226.83	1046.67	822.88
South Asia	1259.69	1007.93	692.12
<i>Labour Market Status</i>			
Employed	1121.04	975.37	795.72
Self-employed	1509.55	1288.92	662.24
Unemployed	697.09	556.33	400.00
Inactive	691.22	578.42	500.00

Table: Wage Means by Legal Status (Part 2)

Wage Differences (cont.)

	Cittadino o Equiparabile	Regolare	Irregolare
<i>Province</i>			
Varese	1173.04	996.09	795.87
Como	1232.12	1013.01	775.19
Sondrio	1123.19	981.18	905.00
Milano	1136.37	987.11	799.87
Bergamo	1143.30	947.64	797.06
Brescia	1204.72	1011.94	756.91
Pavia	1089.22	1017.29	763.36
Cremona	1182.01	1039.43	829.32
Mantova	1148.33	999.32	732.70
Lecco	1154.42	986.49	778.41
Lodi	1141.57	964.86	708.59
Monza e Brianza	1142.61	900.07	739.26

Table: Wage Means by Legal Status (Part 3)

Distribution by Education and Employment (%)

	Cittadino	Regolare	Irregolare	Total
<i>Level of Education</i>				
Nessun titolo	2.30	4.24	0.91	7.45
Scuola dell'obbligo	12.08	21.00	3.33	36.40
Scuola superiore	17.59	21.39	3.45	42.44
Laurea e simili	6.38	6.41	0.91	13.71
Total	38.35	53.04	8.60	100.00
<i>Labour Market Status</i>				
Employed	33.94	49.15	7.88	90.97
Self-employed	3.89	3.27	0.57	7.73
Unemployed	0.20	0.22	0.04	0.46
Inactive	0.38	0.45	0.01	0.85
Total	38.40	53.09	8.51	100.00

Table: Distribution by Education and Labour Market Status

Distribution by Occupation Type (%)

	Cittadino	Regolare	Irregolare	Total
<i>Type of Work</i>				
Operai generici nell'industria	6.45	7.46	0.32	14.24
Operai generici nel terziario	3.23	3.58	0.23	7.04
Operai specializzati	1.60	2.57	0.27	4.45
Operai edili	3.96	5.31	1.33	10.60
Operai agricoli e assimilati	1.39	2.23	0.42	4.04
Addetti alle pulizie	1.80	2.55	0.28	4.63
Impiegati esecutivi e di concetto	1.41	0.72	0.03	2.16
Addetti alle vendite e servizi	1.60	1.46	0.12	3.18
Titolari/esercenti attività comm.	1.92	1.75	0.61	4.27
Addetti alla ristorazione/alberghi	4.40	5.94	0.46	10.79
Mestieri artigianali	2.13	2.47	0.44	5.04
Addetti ai trasporti	1.66	1.43	0.09	3.18
Domestici fissi	0.91	1.68	0.22	2.81
Domestici ad ore	2.21	3.32	0.64	6.16
Assistenti domiciliari (badanti)	2.26	3.97	1.04	7.28
Baby sitter	0.44	1.27	0.27	1.98
Assistenti socio-assistenziali (OSS)	1.39	0.76	0.03	2.18
Medici e paramedici	0.98	0.50	0.01	1.49
Intellettuali	1.77	0.62	0.01	2.40
Prostituzione	0.20	0.20	0.02	0.43
Sportivi	0.05	0.06	0.04	0.16
Altro	0.71	0.60	0.17	1.49
Total	42.49	50.46	7.05	100.00

Table: Distribution by Type of Work

Mean Monthly Wage by Legal Status, 2001-2021

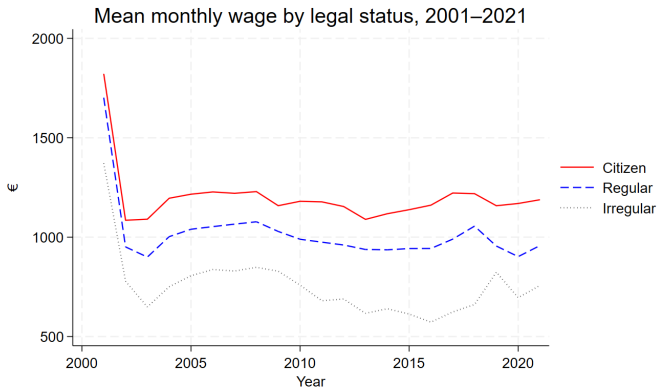


Figure: Evolution of mean monthly wages across legal status categories

Wage Irregular / Regular

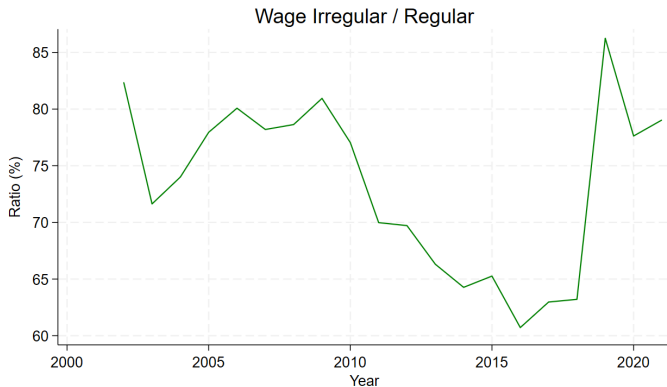


Figure: Ratio of irregular to regular migrant wages over time

Wage Gap Relative to Citizens (%)

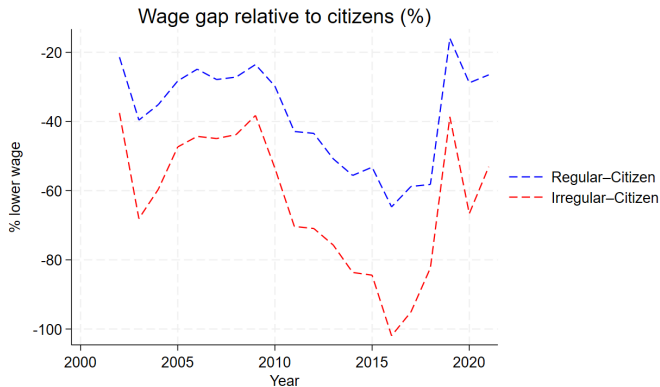


Figure: Wage gap of regular and irregular migrants relative to citizens

Wage Gap Estimation

In the following slides, we present the results for the estimation of the wage gap between native and migrant workers according to the following specification:

$$\ln(w_{it}) = \alpha + \beta \cdot \text{LS}_i + \gamma' X_{it} + \delta_t + \delta_p + \varepsilon_{it}$$

where $\ln(w_{it})$ denotes the log wage for individual i at time t , LS_i is a categorical variable for legal status distinguishing between citizens or equivalent, regular migrants, and irregular migrants, X_{it} represents a vector of individual characteristics, δ_t captures time fixed effects, and δ_p captures province fixed effects.

Wage Gap Estimation

	(1)	(2)	(3)	(4)	(5)
Reg.	-0.0788*** (0.00346)	-0.0705*** (0.00345)	-0.0576*** (0.00347)	-0.0576*** (0.00343)	-0.0419*** (0.00344)
Irreg.	-0.300*** (0.00603)	-0.284*** (0.00601)	-0.239*** (0.00625)	-0.250*** (0.00620)	-0.221*** (0.00646)
Age	0.00443*** (0.000169)	0.0466*** (0.00121)	0.0431*** (0.00121)	0.0412*** (0.00120)	0.0388*** (0.00121)
Gender	-0.297*** (0.00300)	-0.301*** (0.00300)	-0.299*** (0.00299)	-0.292*** (0.00296)	-0.186*** (0.00385)
Scuola obbl.	0.0415*** (0.00556)	0.0364*** (0.00552)	0.0370*** (0.00550)	0.0383*** (0.00545)	0.0359*** (0.00555)
Scuola sec. sup.	0.0575*** (0.00557)	0.0517*** (0.00552)	0.0527*** (0.00550)	0.0543*** (0.00545)	0.0534*** (0.00557)
Laurea	0.100*** (0.00629)	0.0932*** (0.00624)	0.0977*** (0.00622)	0.0976*** (0.00616)	0.0918*** (0.00642)
Years since migr.	0.0103*** (0.000309)	0.0103*** (0.000307)	0.0267*** (0.000713)	0.0250*** (0.000715)	0.0226*** (0.000724)
Year FE	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes
Education FE	No	Yes	Yes	Yes	Yes
Origin FE	Yes	Yes	Yes	Yes	Yes
Occupation FE	No	No	No	No	Yes
Labour Cond. FE	No	No	No	Yes	Yes
Observations	74406	73946	73946	73391	66880

SE in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Wage Gap Estimation: Interaction LS x Year

Year	Coeff.	std. err.	t	P> t	[95% conf. interval]	
2003	-.365	.024	-15.13	0.000	-.412	-.317
2004	-.268	.019	-14.31	0.000	-.305	-.231
2005	-.172	.018	-9.71	0.000	-.206	-.137
2006	-.116	.015	-7.80	0.000	-.145	-.087
2007	-.175	.016	-11.27	0.000	-.205	-.144
2008	-.154	.014	-10.67	0.000	-.183	-.126
2009	-.177	.016	-11.04	0.000	-.208	-.145
2010	-.276	.032	-8.60	0.000	-.339	-.213
2011	-.382	.033	-11.51	0.000	-.447	-.317
2012	-.420	.033	-12.76	0.000	-.484	-.355
2013	-.405	.050	-8.09	0.000	-.503	-.307
2014	-.594	.048	-12.34	0.000	-.688	-.499
2015	-.449	.054	-8.31	0.000	-.555	-.343
2016	-.576	.054	-10.76	0.000	-.681	-.471
2017	-.349	.086	-4.04	0.000	-.518	-.179
2018	-.457	.081	-5.61	0.000	-.617	-.297
2019	-.016	.067	-0.23	0.814	-.146	.115
2020	-.348	.050	-6.93	0.000	-.447	-.250
2021	-.354	.068	-5.22	0.000	-.486	-.221

Table: Wage Penalty for Irregular migrants with respect to citizens or equivalent, by Year

Wage Gap Estimation: Interaction LS x Province

Provincia	Coeff.	std. err.	t	P> t	[95% conf. interval]	
Varese	-.190	.019	-10.08	0.000	-.227	-.153
Como	-.330	.022	-15.32	0.000	-.372	-.287
Sondrio	-.021	.048	-0.44	0.663	-.115	.073
Milano	-.178	.009	-19.46	0.000	-.196	-.160
Bergamo	-.157	.024	-6.62	0.000	-.203	-.110
Brescia	-.318	.017	-18.47	0.000	-.352	-.284
Pavia	-.190	.020	-9.44	0.000	-.229	-.150
Cremona	-.226	.025	-9.14	0.000	-.275	-.178
Mantova	-.373	.026	-14.21	0.000	-.424	-.321
Lecco	-.193	.028	-6.78	0.000	-.249	-.137
Lodi	-.297	.025	-11.97	0.000	-.346	-.249
Monza e Brianza	-.176	.068	-2.59	0.010	-.310	-.043

Table: Wage Penalty for Irregular migrants with respect to citizens or equivalent, by Province