ANNEX

Table A1. Determinants of underemployment in platform work: Logit models

Model	I	П	Ш	IV		
Dependent variable	Underemployment	Underemployment	Underemployment	Underemployment		
	hours	hours	by meene	Sy moonie		
Predicted probability (y)	0.8093	0.8093	0.0892	0.0892		
Independent variables (x)	dy/dx z- stat	dy/dx z-stat	dy/dx z- stat	dy/dx z-stat		
Type of work on platforms						
On location (ref.)						
Online	0.0673 2.81 ***	0.0724 3.02 ***	0.0520 3.41 ***	0.0526 3.43 ***		
On location + online	0.0643 2.71 ***	0.0680 2.87 ***	-0.0026 -0.19	-0.0029 -0.21		
Intensity of work on platforms						
Marginal PT (ref.)	0.0004 1.07	0.0010 1.04	0 0 2 0 9 5 0 ***	0 0 20 5 0 5 0 ***		
Main PT	-0.0224 -1.07	-0.0219 -1.04	-0.0396 -2.59	-0.0395 -2.56		
	0.0000 0.10	0.0020 0.00	2	0.0001 2.10		
Specialty in platform work	0 0 1 5 4 2 1 5 ***	0.0161 2.22 ***	0.0040 1.26	0.0049 1.22		
Number of platforms 1 (ref.)	0.0154 5.15	0.0101 5.55	-0.0049 -1.20	-0.0046 -1.22		
2	0.0716 3.09 ***	0.0714 3.08 ***	-0.0038 -0.26	-0.0047 -0.33		
3	0.0687 2.66 ***	0.0690 2.67 ***	0.0087 0.49	0.0079 0.45		
5 or more	0.1129 3.81 ***	0.0382 1.09	0.0190 0.91	0.0132 0.03		
Motivation for entry to work on platfo.	rms 0.0543 2.76 ***	0 0544 2 75 ***	-0.0016 -0.12	-0.0019 -0.14		
Neocooky	0.0040 2.70	0.0044 2.70	0.0010 0.12	0.0010 0.14		
Experience working on platforms						
Between 6 and 12 months	-0 0110 -0 49	-0 0126 -0 56	-0 0360 -2 04 **	-0 0361 -2 05 **		
Between 1 and 2 years	-0.0457 -1.88 *	-0.0474 -1.96 **	-0.0186 -1.02	-0.0187 -1.03		
Between 3 and 4 years	-0.0716 -2.34 **	-0.0743 -2.45 **	-0.0168 -0.79	-0.0161 -0.75		
More than 4 years	-0.0790 -2.35 ***	-0.0788 -2.33	0.0149 0.59	0.0142 0.57		
Demographic characteristics						
Woman	0.0149 0.86	0.0162 0.94	0.0052 0.44	0.0043 0.37		
16-25 (ref.)						
26-35	0.0666 2.69 ***	0.0661 2.67 ***	0.0346 2.09 **	0.0349 2.09 **		
36-45	0.0938 3.69 ***	0.0934 3.68 ***	0.0240 1.49	0.0241 1.5		
Greater than 55	0.0849 2.1 **	0.0842 2.08 **	0.0704 3.26	0.0710 3.29		
Live as a couple	-0.0012 -0.06	-0.0021 -0.11	-0.0103 -0.76	-0.0103 -0.76		
Number of children under 18 years	-0.0016 -0.19	-0.0010 -0.11	-0.0054 -0.81	-0.0050 -0.75		
orage						
Educational level						
Basic education (ref.)	0.0650 1.97 *	0 0 0 0 2 2 5 **	0.0202 1.6	0.0207 1.62		
Higher education	0.1042 3.01 ***	0.1191 3.36 ***	0.0268 1.46	0.0277 1.52		
Employee (ref.)						
Self-employed	0.0049 0.16	0.0049 0.16	0.0151 0.75	0.0146 0.73		
Unemployed	0.0485 1.58	0.0455 1.49	0.0700 2.62 ***	0.0699 2.63 ***		
Student	0.0127 0.46	0.0128 0.46 0.0379 0.79	0.0488 1.9 * 0.0321 0.9	0.0493 1.91 *		
Housework	0.0498 1.06	0.0476 1	0.0255 0.67	0.0239 0.63		
Country dymmios (Spain raf)	Vaa	Vaa	Vaa	Vaa		
# observations	2.192	2.192	2.411	2.411		
Log pseudolikelihood	-998.4	-994.2	-660.6	-658.5		

Notes: * 0.1> $p \ge 0.05$; ** 0.05> $p \ge 0.01$; *** p < 0.01. Models II and IV include interactions of the variables that measure educational level and type of work on platforms.

	Table A2. Predicted	probabilities of underem	ployment by hours accor	ding to education level and t	vpe of work on platforms
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	Pre of unde	dicted probat	oility in hours	Marginal effect of the type of work on platforms			Marginal effect of education								
Education	Basic	Secondary	Higher	В	asic	Seco	ondary	Н	igher	E	Basic	Seco	ndary	Hi	gher
Type of work on platforms				dy/dx	z-stat	dy/dx	z-stat	dy/dx	z-stat	dy/dx	z-stat	dy/dx	z-stat	dy/dx	z-stat
On location	0.4906	0.7259	0.8135	F	Ref.	F	Ref.		Ref.		Ref.	0.2353	2.33 **	0.3229	3.27 ***
Online	0.7496	0.8272	0.8377	0.2590	2.39 **	0.1013	2.56 **	0.0242	0.81		Ref.	0.0776	1.39	0.0881	1.61
On location + online	0.7973	0.8011	0.8380	0.3067	2.99 ***	0.0751	1.89 *	0.0245	0.84		Ref.	0.0038	0.08	0.0407	0.95

Note: The predicted probabilities and the marginal effects correspond to Model II of Table A1.

Table A3. Predicted probabilities of underemployment by income according to educational level and type of work on platforms

	Pre of under	edicted probal employment i	bility in income	the	Marginal effect type of work on platfo	rms	Marginal effect of education			
Education	Basic	Secondary	Higher	Basic	Secondary	Higher	Basic	Secondary	Higher	
Type of work on platforms				dy/dx z-stat	dy/dx z-stat	dy/dx z-stat	dy/dx z- stat	dy/dx z-stat	dy/dx z-stat	
On location	0.0537	0.0842	0.0649	Ref.	Ref.	Ref.	Ref.	0.0305 0.73	0.0112 0.29	
Online	0.0541	0.1319	0.1297	0.0004 0.01	0.0477 1.76 *	0.0648 3.21 ***	Ref.	0.0778 2.58 ***	0.0756 2.68 ***	
On location + online	0.0764	0.0635	0.0687	0.0226 0.51	-0.0207 -0.86	0.0038 0.21	Ref.	-0.0128 -0.44	-0.0077 -0.28	

Note: The predicted probabilities and the marginal effects correspond to Model IV of Table A1.

Model	V	VI	VII	VIII	IX	Х	XI	XII
Dependent variable	When to work	How many hours	What tasks to	How to develop	Health and safety	Monotonous tasks	Stress	Price decision
			develop	tasks				l do not decide
	l cannot decide	I cannot decide	I have no choice	l cannot decide	l do not work in a	Work on	I often face	what price to
	when to work	how many hours to	about the tasks to	how to perform my	safe and physically	monotonous/routin	stressful situations	charge for my
		work	develop	tasks	healthy	e tasks		services
-					environment			
Predicted probability (y)	0.0529	0.0621	0.0912	0.0842	0.0703	0.5202	0.5364	0.1759
Independent variables (x)	dy/dx z-	dy/dx z-	dy/dx z-	dy/dx z-	dy/dx z-	dy/dx z-	dy/dx z-	dy/dx z-
	stat	Stat	stat	stat	stat	stat	stat	stat
<i>Type of work on platforms</i> On location (ref.)								
Online	-0.0266 -1.97 **	-0.0149 -1.04	-0.0405 -2.45 **	-0.0054 -0.33	-0.0198 -1.43	-0.0078 -0.29	-0.0584 -2.12 **	0.0210 0.97
On location + online	-0.0385 -2.87 ***	-0.0245 -1.8 *	-0.0403 -2.47 **	-0.0228 -1.49	-0.0027 -0.19	0.0302 1.16	0.0651 2.48 **	-0.0840 -4.06 ***
Intensity of work on platforms								
Secondary PT	0 0022 0 21	-0.0007 -0.06	0.0117 0.86	0 0226 1 75 *	0 0 2 9 0 2 2 6 **	-0.0346 -1.41	0.0286 1.16	-0.0617 -3.18 ***
Main PT	0.0161 1.27	0.0147 1.04	0.0285 1.72 *	0.0293 1.85 *	0.0160 1.15	-0.0141 -0.5	0.0271 0.98	-0.0830 -3.77 ***
	0.0101 1.21	0.0111 1.01	0.0200 1.12	0.0200 1.00	0.0100 1.10	0.0111 0.0	0.0271 0.00	0.0000 0.11
Speciality in platform work	0.0015 0.55	0.0021 1.01	0.0000 0.04	0.0024 4.00	0.0000 0.01	0.0020 0.76	0.0107 0.04 **	0.0106 0.60 ***
Number of platforms	-0.0015 -0.55	-0.0031 -1.01	-0.0020 -0.04	-0.0034 -1.00	0.0000 -0.01	-0.0036 -0.76	0.0107 2.04	-0.0120 -2.09
1 (ref.)								
2	-0.0186 -1.57	-0 0143 -1 15	-0 0304 -1 91 *	-0 0346 -2 24 **	-0.0186 -1.31	0.0516 2.05 **	0.0156 0.61	0.0039 0.22
3	0.0005 0.03	-0.0087 -0.58	-0.0239 -1.28	-0.0357 -2.01 **	-0.0106 -0.63	0.0669 2.23 **	-0.0028 -0.09	0.0357 1.55
4	-0 0110 -0 55	-0.0057 -0.26	-0.0322 -1.38	-0.0385 -1.69 *	-0 0278 -1 39	0 1302 3 28 ***	0.0212 0.51	0.0541 1.66 *
5 or more	-0.0120 -0.68	-0.0307 -1.83 *	-0.0640 -3.29 ***	-0.0591 -2.96 ***	-0.0380 -2.07 **	0.1356 3.8 ***	-0.0109 -0.3	0.0698 2.38 **
Mativation to work on platforms								
Necessity	-0.0337 -2.75 ***	-0.0208 -1.69 *	-0.0637 -4.07 ***	-0.0560 -3.72 ***	-0 0295 -2 2 **	0 2303 10 75 ***	0 1852 8 13 ***	-0.0882 -4.72 ***
	-0.0337 -2.73	-0.0200 -1.03	-0.0037 -4.07	-0.0300 -3.72	-0.0235 -2.2	0.2333 10.73	0.1052 0.15	-0.0002 -4.72
Experience working on platforms								
Less than 6 months (ref.)								
Between 6 and 12 months	-0.0214 -1.4	-0.0088 -0.57	-0.0236 -1.37	0.0076 0.46	-0.0072 -0.48	-0.0557 -1.98 **	-0.0369 -1.3	-0.0003 -0.01
Between 1 and 2 years	-0.0298 -1.96 **	-0.0090 -0.56	-0.0379 -2.16 **	0.0026 0.15	0.0031 0.19	-0.0639 -2.14 **	-0.0869 -2.89 ***	-0.0062 -0.27
Between 3 and 4 years	-0.02/1 -1.52	-0.0290 -1.67 *	0.0113 0.49	-0.0099 -0.5	0.0025 0.13	-0.0873 -2.45 **	-0.0003 -0.01	0.0134 0.48
More than 4 years	-0.0396 -2.17 ^^	-0.0223 -1.14	0.0046 0.18	0.0098 0.41	-0.0197 -1.01	-0.0984 -2.6 ^^^	-0.0762 -2.03 **	-0.0164 -0.58
Demographic characteristics								
Woman	-0.0040 -0.42	-0.0002 -0.02	-0.0226 -1.84 *	-0.0076 -0.64	-0.0274 -2.58 ***	-0.0159 -0.77	-0.0418 -2.02 **	0.0255 1.6
Age								
16-25 (ref.)								
26-35	-0.0136 -1.01	0.0128 0.87	-0.0479 -2.91 ***	-0.0272 -1.57	0.0151 0.94	-0.0256 -0.91	-0.0766 -2.69 ***	0.0292 1.39
36-45	-0.0040 -0.27	0.0072 0.49	-0.0304 -1.63	-0.0352 -1.98 **	-0.0202 -1.41	-0.0613 -2.02 **	-0.0739 -2.4 **	0.0198 0.88

Table A4. Determinants of working conditions on platforms: Logit models

46-55	-0.0209 -1.32	0.0186 0.94	-0.0370 -1.71 *	-0.0336 -1.64	-0.0289 -1.75 *	-0.0558 -1.57	-0.0921 -2.6 ***	0.1032 3.6 ***
Greater than 55	-0.0327 -1.61	0.0143 0.52	-0.0551 -2.08 **	-0.0587 -2.62 ***	-0.0143 -0.52	-0.0484 -0.94	-0.1310 -2.5 **	0.0233 0.6
Live as a couple	0.0082 0.77	-0.0154 -1.38	0.0175 1.34	0.0076 0.62	-0.0097 -0.8	-0.0362 -1.6	-0.0079 -0.34	-0.0051 -0.29
Number of children under 18	0.0004 0.09	0.0035 0.8	-0.0075 -1.29	-0.0023 -0.42	0.0061 1.23	0.0342 3.33 ***	0.0252 2.52 **	-0.0317 -3.84 ***
<i>Educational level</i> Basic education (ref.)								
Secondary education	0.0071 0.44	-0.0260 -1.31	0.0032 0.15	-0.0294 -1.31	-0.0044 -0.23	-0.0141 -0.38	-0.0858 -2.33 **	0.0065 0.23
Higher education	0.0072 0.46	-0.0241 -1.21	-0.0076 -0.36	-0.0297 -1.34	-0.0074 -0.4	-0.0215 -0.6	-0.0621 -1.73 *	0.0062 0.23
Labour Situation Employee (ref.)								
Self-employed	-0.0267 -1.84 *	-0.0265 -1.69 *	-0.0529 -3.38 ***	-0.0381 -2.32 **	-0.0285 -1.7 *	-0.0907 -2.39 **	-0.0654 -1.69 *	-0.0554 -2.53 **
Unemployed	0.0075 0.35	-0.0085 -0.47	0.0377 1.35	0.0451 1.66 *	0.0047 0.22	0.0156 0.4	-0.0466 -1.22	0.0889 2.65 ***
Student	-0.0218 -1.67 *	0.0015 0.08	0.0108 0.54	0.0013 0.07	0.0134 0.7	-0.0022 -0.06	-0.0861 -2.46 **	0.0631 2.13 **
Retired	-0.0111 -0.28	0.0129 0.33	-0.0019 -0.05	-0.0105 -0.29	-0.0183 -0.54	-0.0425 -0.68	-0.0822 -1.28	0.0344 0.69
Housework	0.0002 0.01	-0.0391 -2.07 **	-0.0073 -0.2	-0.0241 -0.79	-0.0053 -0.17	0.0767 1.29	0.0796 1.42	0.0449 0.95
Country dummies (Spain, ref.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# observations	2.418	2.415	2.413	2.412	2.389	2.403	2.407	2.393
Log pseudolikelihood	-463.1	-528.4	-682.2	-652.0	-570.8	-1516.9	-1541.0	-998.9
Note: * 0 1 > $p \ge 0.05$ ** 0.05 > p	$\geq 0.01^{+} *** p < 0.01$							

Note: * 0.1 >*p* ≥ 0.05; ** 0.05 >*p* ≥ 0.01; *** *p*< 0.01.

Table A5. Definition of variables

Variable	Dependent variables (Description)
Hourly underemployment	Dichotomous with value 1 for those workers in digital platforms who declare that they work fewer hours than they want.
Underemployment by income	Dichotomous with a value of 1 for those workers on digital platforms who state that they disagree or strongly disagree with the statement: "I consider myself fairly remunerated".
When to work	Dichotomous with value 1 for those workers in digital platforms who declare that they disagree or strongly disagree with the statement: "I can decide when to work".
How many hours	Dichotomous with value 1 for those workers in digital platforms who declare that they disagree or strongly disagree with the statement: "I can decide how many hours to work".
What tasks to develop	Dichotomous with a value of 1 for those workers in digital platforms who state that they disagree or strongly disagree with the statement: "I can decide which tasks to perform".
How to develop tasks	Dichotomous with value 1 for those workers in digital platforms who declare that they disagree or strongly disagree with the statement: "I can decide how to develop my tasks".
Health and safety	Dichotomous with value 1 for those workers in digital platforms who declare that they disagree or strongly disagree with the statement: "I work in a safe and physically healthy environment".
Monotonous tasks	Dichotomous with value 1 for those workers in digital platforms who declare that they agree or strongly agree with the statement: "I work mostly in monotonous/routine tasks".
Stress	Dichotomous with value 1 for workers in digital platforms who declare that they agree or strongly agree with the statement: "I often face stressful situations".
Price decision	Dichotomous with value 1 for those workers in digital platforms who declare that they disagree or strongly disagree with the statement: "I decide what price to charge for my services".
	Independent variables
Type of work on platforms	Dichotomous with value 1 for those workers on online platforms in which the client and worker are paired digitally and the payment is also made digitally but the service is provided in situ, in person or <i>on site</i> (examples include jobs mediated by platforms such as Uber, Deliveroo, Handy, TaskRabbit and MyBuilder, among others) (<i>ref</i>); value 2 for those workers on online platforms in which client and worker are paired digitally and pay digitally but the service can be provided anywhere because it is <i>online</i> (examples are the jobs mediated by platforms such as Upwork, Freelancer, Timeetc, Clickworker, and PeoplePerHour, among others); and the value 3 for those workers on online platforms in which client and worker are paired digitally and payment is also made digitally and who perform both <i>on-site</i> and <i>online work</i> .
Intensity of work on platforms	Dichotomous with value 1 for workers on marginal digital platforms, 2 for workers of secondary platforms and 3 for workers in main digital platforms, following the criteria established by Brancati et al. (2020, p. 15).
Number of tasks	Variable that indicates the number of different tasks performed by the worker through digital platforms.
Number of platforms	Variable that indicates the number of different platforms in which the digital worker provides services.
Motivation for employment in platforms	Dichotomous with a value of 1 for those workers who declare that they have access to employment on platforms because they have had difficulty finding a traditional job.
Experience working on platforms	Discrete variable that indicates seniority in work on platforms and takes the following values: 1 (less than 6 months); 2 (between 6 and 12 months); 3 (between 1 and 2 years); 4 (between 3 and 4 years); 5 (more than 4 years).
Woman	Binary variable that takes the value one for women.
Age	Categorical age in years per individual according to interval: 1 (16-25); 2 (26-35); 3 (36-45); 4 (46-55); 5 (more than 55).
Live as a couple	Dichotomous with value 1 for individuals living with a partner.
Number of children under 18 years of age	Variable that measures the number of children under 18 years of age.
Educational level	Discrete variable that indicates the highest educational level reached and takes the following values: 1 (basic education); 2 (secondary education); 3 (higher education).
Employment situation	Discrete variable that takes the value 1 if the individual is salaried, 2 if he or she is self-employed, 3 if he or she is unemployed, 4 if he or she is a student, 5 if he or she is retired and 6 if he or she is engaged in domestic work.
Country dummies	14 <i>dummies</i> corresponding to the countries included in the analysis.

Table A6. Summary statistics

	Media	Desv. Est.	Mín.	Máx.
1. Hourly underemployment	0.809		0	1
2. Underemployment by income	0.096		0	1
3. When to work	0.051		0	1
4. How many hours	0.063		0	1
5. What tasks to develop	0.090		0	1
6. How to develop tasks	0.086		0	1
7. Health and safety	0.067		0	1
8. Monotonous tasks	0.506		0	1
9. Stress	0.516		0	1
10. Price decision	0.185		0	1
11. Type of platform work	2.197	0.776	1	3
12. Intensity platform work	2.008	0.739	1	3
13. Number of tasks	2.779	1.962	1	11
14. Number of platforms	2.415	1.263	1	5
15. Motive for entry	0.711		0	1
16. Experience in platform work	2.709	1.274	1	5
17. Female	0.349		0	1
18. Age	2.360	1.225	1	5
19. Cohabitating	0.619		0	1
20. Number of children under 18	0.955	1.070	0	5
21. Educational attainment	2.477	0.662	1	3
22. Labour situation	1.902	1.415	1	6