Data appendix

A. Variables definitions

We consider 5 different labor market outcomes in our analysis:

(1) Employed: A dummy variable equal to 1 if the individual is employed and 0 if the individual is not-employed. An employed person is a person aged 15 years or older who has worked (for pay or profit) for at least one hour during a given week or having a job from which being absent under conditions on the reason of absence (holidays, sick leave, maternity leave, etc.) or duration. Not-employed individuals represent unemployed individuals and those outside the labor force.

(2) Unemployment: A dummy variable equal to 1 if the individual is unemployed and 0 if the individual is employed. An unemployed persons is a person who is no paid nor self-employed, is at present seeking for employment and is available for work.

(3) Unemployment duration: A numerical variable from 1 to 120 representing the time in months since the person last worked. This variable is only defined for unemployed individuals with employment experience.

(4) Not-employed because of health problems: A dummy variable equal to 1 if the individual is not-employed because he/she is unable to work due to health problems and 0 otherwise.

(5) Income deciles: A numerical variable from 1 to 10 representing the monthly take home pay from main job in deciles groups (1-below the 1st decile; 2-between the 1st and the 2nd decile; 3-between the 2nd and the 3rd decile; 4-between the 3rd and the 4th decile; 5-between the 4th and the 5th decile; 6-between the 5th and the 6th decile; 7-between the 6th and the 7th decile; 8-between the 7th and the 8th decile; 9-between the 8th and the 9th decile and 10-more or equal to the 9th decile).

The 3 different independent variables for the measures of the digital revolution in our analysis are constructed based on individuals' occupations. For the employed individuals, the occupations represent their current occupation and for the not-employed they represent their previous occupations (the one they had before moving to not-employment).

(1) Growing occupations: A dummy variable equal to 1 if the individual is in a growing occupations (ISCO groups 21, 22, 23, 24, 25, 26, 31, 33, 34 and 53) and 0 if the individual is/was in a declining occupations (ISCO groups 72, 73, 74 and 75). We obtained this variable from another analysis of the Belgian Labor Force Survey in which we ranked occupations based on changes in the absolute number of workers in each of these occupation between 1986 and 2020. The 10 occupations with the biggest positive changes represent the growing occupations and the 4 occupations with the biggest negative changes the declining occupations. The 10 occupations with the biggest positive changes represent the growing occupations and the 4 occupations with the biggest negative changes the declining occupations.

(2) Occupation growth rate: The percentage changes in the number of workers within each occupations between 1986 and 2020 in Belgium. Again, we obtained this variable from a pevious analysis of the Belgian Labor Force Survey in which we obtain the absolute number of workers in each of the ISCO occupations between 1986 and 2020. To obtain the percentage growth rate, we took the log of the

ratio between the absolute number of workers in each occupations between 2020 and 1986. The occupations growth rates are given in the table below:

Table A.1: Occupations' growth rate by occupations

ISCO-08 (2 digits)	Occupations growth rate	ISCO-08 (2 digits)	Occupations growth rate	ISCO-08 (2 digits)	Occupations growth rate	ISCO-08 (2 digits)	Occupations growth rate
11	0.44	31	0.78	51	0.38	81	-0.25
12	0.87	32	0.23	52	0.16	82	0.23
13	0.85	33	0.74	53	0.61	83	-0.02
14	-0.57	34	1.01	54	0.29	91	0.43
21	0.91	35	0.68	71	-0.02	92	0.04
22	1.03	41	0.02	72	-0.38	93	0.47
23	0.40	42	0.16	73	-0.73	94	0.56
24	1.41	43	-0.15	74	-0.19	95	0.49
25	1.84	44	0.45	75	-0.46	96	0.09
26	1.29						

(3) Automation potential: A scale from 0 to 1 representing the automation potential of occupations, the closer it is to 1 the higher the probability that the occupation will be automated. We obtained this variable from William Schaffers (2019). Building on the work of Frey and Osborne (2017) and applying a novel class probability estimation model to (principally) the O*NET data, he determined the probability of a certain occupation to be automatable, i.e. the automation potential of the occupation. Note that, the automation potential were calculated for each of the ISCO-08 4-digits groups. Since only the occupations at the 3-digits level are given in the EU-LFS, we took the average within the 3-digits groups. The occupations' automation potential are given in the table below:

Table A.2: Occupations' growth rate by occupations

ISCO-08 (3 digits)	Automation potential	ISCO-08 (3 digits)	Automation potential	ISCO-08 (3 digits)	Automation potential	ISCO-08 (3 digits)	Automation potential
111	0.01	311	0.49	511	0.78	811	0.91
112	0.02	312	0.16	512	0.93	812	0.96
121	0.04	313	0.73	513	0.78	813	0.87
122	0.02	314	0.40	514	0.77	814	0.96
131	0.03	315	0.36	515	0.60	815	0.92
132	0.02	321	0.53	516	0.60	816	0.94
133	0.05	322	0.19	521	0.81	817	0.93
134	0.03	323	0.16	522	0.36	818	0.97
141	0.19	324	0.74	523	0.97	821	0.88
142	0.04	325	0.55	524	0.85	831	0.83
143	0.02	331	0.77	531	0.49	832	0.99
211	0.16	332	0.61	532	0.66	833	0.93
212	0.31	333	0.49	541	0.44	834	0.93
213	0.05	334	0.73	711	0.65	835	0.77
214	0.07	335	0.52	712	0.81	911	0.49
215	0.17	341	0.55	713	0.86	912	0.73
216	0.09	342	0.27	721	0.88	921	0.85
221	0.03	343	0.36	722	0.90	931	0.84
222	0.06	351	0.36	723	0.77	932	0.84

223	0.36	352	0.46	731	0.79	933	0.86
225	0.16	411	0.92	732	0.71	941	0.93
226	0.10	412	0.84	741	0.59	952	0.78
231	0.11	413	0.93	742	0.79	961	0.82
232	0.04	421	0.77	751	0.94	962	0.93
233	0.03	422	0.91	752	0.90		
234	0.09	431	0.98	753	0.79		
235	0.21	432	0.68	754	0.62		
241	0.63	441	0.93				
242	0.04						
243	0.35						
251	0.30						
252	0.21						
261	0.27						
262	0.12						
263	0.08						
264	0.40						
265	0.35						

Table A.3 provides the ISCO-08 classifications. The EU-LFS contains information on ISCO-08 at the 1 digit and at the 3 digits. We aggregated the 3 digits groups to obtain the classification at the 2 digits.

Table A.3: ISCO-08 (3 digits) groups

ISCO-08
1. Managers
11. Chief executives, senior officials and legislators
12. Administrative and commercial managers
13. Production and specialized services managers
14. Hospitality, retail and other services managers
2. Professionals
21. Science and engineering professionals
22. Health professionals
23. Teaching professionals
24. Business and administration professionals
25. Information and communications technology professionals
26. Legal, social and cultural professionals
3. Technicians and associate professionals
31. Science and engineering associate professionals
32. Health associate professionals
33. Business and administration associate professionals
34. Legal, social, cultural and related associate professionals
35. Information and communications technicians
4. Clerical support workers
41. General and keyboard clerks
42. Customer services clerks
43. Numerical and material recording clerks
44. Other clerical support workers
5. Service and sales workers
51. Personal service workers
52. Sales workers
53. Personal care workers
54. Protective services workers
7. Craft and related trades workers
71. Building and related trades workers, excluding electricians
72. Metal, machinery and related trades workers

73. Handicraft and printing workers
74. Electrical and electronic trades workers
75. Food processing, wood working, garment and other craft
and related trades

8. Plant and machine operators, and assemblers
81. Stationary plant and machine operators
82. Assemblers
83. Drivers and mobile plant operators

9. Elementary occupations
91. Cleaners and helpers
92. Agricultural, forestry and fishery laborers
93. Laborers in mining, construction, manufacturing and
transport
94. Food preparation assistants
95. Street and related sales and service workers
96. Refuse workers and other elementary workers

References

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