**Supplementary online appendix**

**Table SA1. Description of data sources**

|  |  |  |
| --- | --- | --- |
| Database and source | Description | Variable(s) used in our study |
| Structure of Earnings Survey (SES), 2014  Source: Eurostat | SES contains harmonized data on earnings in EU Member States, Candidate Countries and European Free Trade Association Member States. The SES is a large enterprise sample survey providing detailed and comparable information on the relationships between the level of remuneration and the individual characteristics of employees (sex, age, occupation, length of service, highest educational level attained, etc.) and those of their employer (economic activity, size and location of the enterprise). | Hourly wage, sex, age, education level, full-time/part-time employment, seniority in the company, public/private firm.  Wages are derived from SES as mean average gross hourly earnings in the reference month, converted into US dollars. |
| European Working Conditions Survey (EWCS), 2015 wave  Source: Eurofound | EWCS is a survey focusing on the working conditions of employees across Europe (workers from the European Union, Albania, Bosnia and Herzegovina, Kosovo,1 Montenegro, North Macedonia, Norway, Serbia, Switzerland and Türkiye) on a harmonized basis. The survey is conducted every five years. The general scope of this survey covers detailed aspects of working conditions, including working time duration, work organization, learning and training, physical and psychosocial risk factors, health and safety, work–life balance, workers’ participation, earnings and financial security. | Six indices measuring job quality (social environment, skills and discretion, physical environment, work intensity, prospects and working time quality); detailed description provided in table SA3 and individual characteristics such as sex, age, education, skill level, type of contract, and part-time/full-time employment. |
| World Input–Output Database (WIOD), 2016 release  Source: https://www.rug.nl/ggdc/valuechain/wiod/ | WIOD covers input–output data for 43 countries and 56 sectors according to the classification under the International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4. WIOD data enabled us to compute several measures of global value chain (GVC) intensity. | *FVA/export*: foreign value added in exports.  *GII*: global import intensity of production – intermediate imports along the value chain divided by the value of the final product; industry-level productivity. |
| Webb (2020) | Data on technology exposure are derived from an overlap between the text of job task descriptions and the text of patents, to construct a measure of the exposure of tasks to automation. The method was applied to software, industrial robot and exposure to artificial intelligence (AI). | Software exposure of occupations; robot exposure of occupations; AI exposure of occupations. |
| Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS)  Source: Visser (2019) | ICTWSS database contains country-level data describing the institutional environment in the labour market (e.g. the collective bargaining scheme). | *coord*: coordination of wage setting.  *GOC*: general opening clauses in collective agreement.  *barg*: the predominant level at which wage bargaining takes place. |
| Penn World Table (PWT version 9.1)  Source: https://www.rug.nl/ggdc/productivity/pwt/pwt-releases/pwt9.1 | PWT is a source of additional country-level data on the magnitude of GDP, imports, exports and other economic and financial data etc. | *export*: share of merchandise exports in real GDP at current PPPs.  *import*: share of merchandise imports in real GDP at current PPPs. |

1 As defined in UN Security Council resolution 1244 of 1999.

Source: Our own compilation.

**Table SA2. List of occupations and their technological classification**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ISCO-08 2-digit code | Software exposure | Robot exposure | AI exposure |
| Chief executives, senior officials and legislators | 11 | 45 | 21 | 56 |
| Administrative and commercial managers | 12 | 46 | 23 | 70 |
| Production and specialized services managers | 13 | 51 | 26 | 71 |
| Hospitality, retail and other services managers | 14 | 50 | 26 | 68 |
| Science and engineering professionals | 21 | 62 | 38 | 84 |
| Health professionals | 22 | 39 | 24 | 56 |
| Teaching professionals | 23 | 11 | 11 | 19 |
| Business and administration professionals | 24 | 25 | 13 | 57 |
| Information and communications technology professionals | 25 | 71 | 34 | 83 |
| Legal, social and cultural professionals | 26 | 29 | 19 | 51 |
| Science and engineering associate professionals | 31 | 76 | 59 | 77 |
| Health associate professionals | 32 | 53 | 55 | 52 |
| Business and administration associate professionals | 33 | 35 | 24 | 55 |
| Legal, social, cultural and related associate professionals | 34 | 39 | 37 | 46 |
| Information and communications technicians | 35 | 85 | 57 | 81 |
| General and keyboard clerks | 41 | 33 | 42 | 29 |
| Customer services clerks | 42 | 41 | 34 | 36 |
| Numerical and material recording clerks | 43 | 38 | 22 | 35 |
| Other clerical support workers | 44 | 33 | 38 | 25 |
| Personal services workers | 51 | 22 | 48 | 24 |
| Sales workers | 52 | 24 | 38 | 19 |
| Personal care workers | 53 | 29 | 49 | 23 |
| Protective services workers | 54 | 48 | 51 | 56 |
| Building and related trades workers (excluding electricians) | 71 | 59 | 75 | 49 |
| Metal, machinery and related trades workers | 72 | 63 | 75 | 57 |
| Handicraft and printing workers | 73 | 55 | 62 | 57 |
| Electrical and electronics trades workers | 74 | 62 | 64 | 67 |
| Food processing, woodworking, garment and other craft and related trades workers | 75 | 56 | 65 | 59 |
| Stationary plant and machine operators | 81 | 76 | 75 | 63 |
| Assemblers | 82 | 72 | 74 | 52 |
| Drivers and mobile plant operators | 83 | 77 | 84 | 61 |
| Cleaners and helpers | 91 | 48 | 83 | 23 |
| Labourers in mining, construction, manufacturing and transport | 93 | 56 | 78 | 35 |
| Food preparation assistants | 94 | 6 | 70 | 11 |
| Street and related sales and services workers | 95 | 39 | 10 | 13 |
| Refuse workers and other elementary workers | 96 | 75 | 83 | 44 |

Notes: Measures of software, robot and AI exposure are based on percentiles as proposed by Webb (2020) and cover manufacturing and services sectors. ISCO-08 = International Standard Classification of Occupations, 2008.

Source: Our own compilation based on Webb (2020).

**Table SA3. Job quality indices according to the 2015 EWCS**

|  |  |  |
| --- | --- | --- |
| **Job quality index** | **Main indicators** | **Detailed indicators** |
| Social environment | * Adverse social behaviour * Social support * Management quality | - Exposure to verbal abuse  - Exposure to unwanted sexual attention  - Exposure to threats  - Exposure to humiliating behaviour  - Exposure to physical violence  - Exposure to sexual harassment  - Exposure to bullying/harassment  - Your immediate boss respects you as a person: strongly agree and tend to agree  - Your immediate boss gives you praise and recognition when you do a good job: strongly agree and tend to agree  - Your immediate boss is successful in getting people to work together: strongly agree and tend to agree  - Your immediate boss is helpful in getting the job done: strongly agree and tend to agree  - Your immediate boss provides useful feedback in your work: strongly agree and tend to agree  - Your immediate boss encourages and supports your development: strongly agree and tend to agree  - Help and support from colleagues (most of the time/always)  - Help and support from your manager (most of the time/always) |
| Skills and discretion | * Cognitive dimension * Decision latitude * Organizational participation * Training | - Solving unforeseen problems  - Carrying out complex tasks  - Learning new things  - Working with computers, smartphones and laptops, etc. (at least a quarter of the time)  - Ability to apply your own ideas in work (“sometimes”, “most of the time” and “always”)  - Ability to choose or change the order of tasks  - Ability to choose or change speed or rate of work  - Ability to choose or change methods of work  - Having a say in the choice of work colleagues (“always” or “most of the time”)  - Consulted before objectives are set for own work (“always” or “most of the time”)  - Involved in improving the work organization or work processes of own department or organization (“always” or “most of the time”)  - Ability to influence decisions that are important for your work (“always” or “most of the time”)  - Training paid for or provided by employer over the past 12 months (or paid by oneself if self-employed)  - On-the-job training over the past 12 months |
| Physical environment | * Ambient (vibration, noise, temperature) * Biological and chemical * Posture-related (ergonomic) | - Vibrations from hand tools, machinery  - Noise so loud that you would have to raise your voice to talk to people  - High temperatures that make you perspire even when not working  - Low temperatures whether indoors or outdoors  - Breathing in smoke, fumes (such as welding or exhaust fumes), powder or dust (such as wood dust or mineral dust)  - Handling, or being in skin contact with, chemical products or substances  - Tobacco smoke from other people  - Handling, or being in direct contact with, materials that could be infectious, such as waste, bodily fluids, laboratory materials, etc.  - Tiring or painful positions  - Lifting or moving people  - Carrying or moving heavy loads  - Repetitive hand or arm movements |
| Work intensity | * Quantitative demands * Pace determinants and interdependency * Emotional demands | - Working at very high speed (three quarters of the time or more)  - Working to tight deadlines (three quarters of the time or more)  - Enough time to get the job done (never or rarely)  - Frequent disruptive interruptions  - Interdependency: three or more pace determinants  - Work pace dependent on the work done by colleagues  - Work pace dependent on direct demands from people such as customers, passengers, pupils, patients, etc.  - Work pace dependent on numerical production targets or performance targets  - Work pace dependent on the direct control of your boss  - Hiding your feelings at work (most of the time or always)  - Handling angry clients, customers, patients, pupils, etc. (three quarters of the time or more)  - Being in situations that are emotionally disturbing (a quarter of the time or more) |
| Prospects | * Employment status * Career prospects * Job security * Downsizing | - What kind of employment contract do you have in your main job?  - My job offers good prospects for career advancement (strongly agree and tend to agree)  - I might lose my job in the next six months (strongly agree and tend to agree)  - During the past three years (or past year according to seniority in the company), has the number of employees at your workplace increased, stayed the same or decreased? |
| Working time quality | * Duration * Atypical working time * Working time arrangements * Flexibility | - Long working hours (48 hours or more a week)  - No recovery period (less than 11 hours between two working days in the past month)  - Long working days (10 hours or more a day)  - Night work, Saturday work, Sunday work, shift work  - Control over working time arrangements  - Change in working time arrangements  - Very easy to arrange to take an hour off during working hours to take care of personal or family matters  - Work in free time to meet work demands (several times a month) |

Source: Own compilation based on the 2015 EWCS (Eurofound 2017).

**Table SA4. Correlation between wages and non-wage job quality indices**

|  |  |
| --- | --- |
|  | Wage |
| Social environment | –0.096 |
| Skills and discretion | 0.438 |
| Physical environment | 0.183 |
| 1/work intensity | –0.236 |
| Prospects | 0.275 |
| Working time quality | –0.055 |

Notes: The sample is made up of over 9 million workers from 22 European countries. To facilitate interpretation, we use the inverse of the original work intensity index. The calculations employ weights based on the grossing-up factor for employees (from the SES).

Source: Our own compilation based on indices from the 2015 EWCS and wage data from the 2014 SES.

**Table SA5. Determinants of job quality EWCS indices – *Tech* measured as software exposure (full set of covariates)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.029\*\*\* | 0.008 | –0.074\*\*\* | –0.045\*\*\* | 0.018\*\* | –0.083\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.078\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.058\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.228\*\*\* | 0.017 | –0.171\*\*\* | –0.092\*\*\* | –0.055\*\*\* | 0.026\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.120\*\*\* | 0.033\*\* | –0.137\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.013\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.691\*\*\* | –0.095\*\*\* | –0.249\*\*\* | –0.131\*\*\* | –0.187\*\*\* | 0.152\*\*\* |
|  | (0.017) | (0.027) | (0.024) | (0.020) | (0.015) | (0.015) |
| *skill2* | –0.502\*\*\* | –0.070\*\*\* | –0.174\*\*\* | –0.053\*\*\* | –0.124\*\*\* | 0.053\*\*\* |
|  | (0.013) | (0.019) | (0.020) | (0.013) | (0.011) | (0.012) |
| *skill3* | –0.097\*\*\* | –0.015 | –0.001 | –0.021 | –0.056\*\*\* | 0.078\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.014) | (0.013) | (0.012) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.004 | 0.051\*\*\* | –0.072\*\*\* | –0.066\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *GVC* | 0.625\*\*\* | 0.322 | 0.602\*\*\* | –0.004 | 0.085 | 0.332\*\* |
|  | (0.136) | (0.237) | (0.198) | (0.128) | (0.107) | (0.164) |
| *Tech* | 0.001 | 0.001 | –0.003\*\*\* | 0.001\* | 0 | 0 |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.013\*\*\* | –0.002 | –0.014\*\*\* | –0.001 | –0.004\*\* | –0.006\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.003) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: Sex (male = 1, female = 0). Reference categories: *ageold* (50 and above), *higheduc* (tertiary education up to 4 years and more than 4 years), Skill category (*skill4*), Unlimited contract (*unlimited*), *part-time* (= 1 if part-time employment). Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, and Webb (2020).

**Table SA6. Determinants of job quality EWCS indices – *Tech* measured as robot exposure** (**full set of covariates)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.040\*\*\* | 0.016 | –0.062\*\*\* | –0.045\*\*\* | 0.021\*\*\* | –0.076\*\*\* |
|  | (0.008) | (0.013) | (0.012) | (0.010) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.002 | –0.080\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.036\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.057\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.007) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.216\*\*\* | 0.021 | –0.145\*\*\* | –0.095\*\*\* | –0.051\*\*\* | 0.033\*\*\* |
|  | (0.013) | (0.021) | (0.018) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.115\*\*\* | 0.035\*\* | –0.125\*\*\* | –0.051\*\*\* | –0.030\*\*\* | 0.017\*\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.537\*\*\* | –0.071\* | 0.198\*\*\* | –0.180\*\*\* | –0.150\*\*\* | 0.245\*\*\* |
|  | (0.023) | (0.039) | (0.040) | (0.028) | (0.020) | (0.022) |
| *skill2* | –0.419\*\*\* | –0.061\*\*\* | 0.086\*\*\* | –0.083\*\*\* | –0.103\*\*\* | 0.101\*\*\* |
|  | (0.016) | (0.023) | (0.026) | (0.016) | (0.013) | (0.013) |
| *skill3* | –0.058\*\*\* | –0.004 | 0.110\*\*\* | –0.032\*\* | –0.047\*\*\* | 0.103\*\*\* |
|  | (0.013) | (0.022) | (0.021) | (0.014) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.032\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.059\*\*\* | 0.003 | 0.054\*\*\* | –0.073\*\*\* | –0.067\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *GVC* | 0.548\*\*\* | 0.332\* | 0.559\*\*\* | –0.129 | 0.092 | 0.097 |
|  | (0.121) | (0.189) | (0.175) | (0.101) | (0.104) | (0.136) |
| *Tech* | –0.001\*\*\* | 0 | –0.007\*\*\* | 0.001\* | 0 | –0.002\*\*\* |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.012\*\*\* | –0.003 | –0.013\*\*\* | 0.002 | –0.004\*\*\* | –0.001 |
|  | (0.002) | (0.003) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: See notes in table SA5.

Source: Our own calculation based on data from the EWCS and WIOD, and Webb (2020).

**Table SA7. Determinants of job quality EWCS indices – *Tech* measured as AI exposure (full set of covariates)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.022\*\*\* | 0.002 | –0.085\*\*\* | –0.045\*\*\* | 0.015\*\* | –0.087\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.008) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.077\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.014\*\* | –0.047\*\*\* | –0.059\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.232\*\*\* | 0.015 | –0.179\*\*\* | –0.092\*\*\* | –0.056\*\*\* | 0.023\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.121\*\*\* | 0.031\*\* | –0.138\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.012\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.717\*\*\* | –0.039 | –0.444\*\*\* | –0.092\*\*\* | –0.189\*\*\* | 0.144\*\*\* |
|  | (0.020) | (0.029) | (0.029) | (0.021) | (0.017) | (0.019) |
| *skill2* | –0.517\*\*\* | –0.035 | –0.284\*\*\* | –0.031\*\* | –0.125\*\*\* | 0.049\*\*\* |
|  | (0.016) | (0.022) | (0.024) | (0.014) | (0.013) | (0.016) |
| *skill3* | –0.109\*\*\* | –0.007 | –0.061\*\*\* | –0.013 | –0.058\*\*\* | 0.072\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.013) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.056\*\*\* | –0.007 | 0.036\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.005 | 0.051\*\*\* | –0.071\*\*\* | –0.066\*\*\* | 0.111\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *GVC* | 0.042 | 0.164 | –0.018 | 0.122 | –0.053 | 0.353\*\*\* |
|  | (0.147) | (0.253) | (0.166) | (0.131) | (0.115) | (0.125) |
| *Tech* | 0 | 0.001\* | –0.004\*\*\* | 0.001\*\*\* | 0 | 0.001\* |
|  | (0.001) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | 0 | 0.001 | –0.002 | –0.003 | –0.001 | –0.006\*\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: See notes in table SA5.

Source: Our own calculation based on data from the EWCS and WIOD, and Webb (2020).

**Table SA8.** **Determinants of wages**

|  |  |  |  |
| --- | --- | --- | --- |
| Dependent variable: log of wage | | | |
|  | Software exposure | Robot exposure | AI exposure |
| *ln\_prod* | 0.098\*\*\* | 0.093\*\*\* | 0.099\*\*\* |
|  | (0.020) | (0.020) | (0.020) |
| *sex* | 0.145\*\*\* | 0.167\*\*\* | 0.097\*\*\* |
|  | (0.005) | (0.005) | (0.005) |
| *ageyoung* | –0.142\*\*\* | –0.148\*\*\* | –0.132\*\*\* |
|  | (0.012) | (0.010) | (0.012) |
| *ageaverage* | –0.008 | –0.014\*\*\* | –0.008 |
|  | (0.006) | (0.005) | (0.006) |
| *loweduc* | –0.492\*\*\* | –0.323\*\*\* | –0.453\*\*\* |
|  | (0.017) | (0.013) | (0.021) |
| *mededuc* | –0.357\*\*\* | –0.243\*\*\* | –0.328\*\*\* |
|  | (0.013) | (0.011) | (0.016) |
| *full-time* | 0.060\*\*\* | 0.041\*\*\* | 0.035\*\*\* |
|  | (0.011) | (0.010) | (0.010) |
| *shortdur* | –0.303\*\*\* | –0.270\*\*\* | –0.290\*\*\* |
|  | (0.018) | (0.014) | (0.019) |
| *meddur* | –0.213\*\*\* | –0.190\*\*\* | –0.206\*\*\* |
|  | (0.011) | (0.010) | (0.011) |
| *longdur* | –0.122\*\*\* | –0.107\*\*\* | –0.118\*\*\* |
|  | (0.009) | (0.008) | (0.008) |
| *public* | 0.038\*\* | 0.037\*\* | 0.038\*\*\* |
|  | (0.015) | (0.015) | (0.014) |
| *GVC* | –0.361\*\* | –0.456\*\*\* | –0.401\*\*\* |
|  | (0.150) | (0.127) | (0.154) |
| *Tech* | –0.002\*\*\* | –0.007\*\*\* | 0.004\*\*\* |
|  | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | 0.005\* | 0.007\*\*\* | 0.004\* |
|  | (0.003) | (0.002) | (0.002) |
| *R2* | 0.8 | 0.82 | 0.81 |
| *N* | 9 218 140 | 9 218 140 | 9 218 140 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: *sex* (male = 1, female = 0), *public* (public enterprise = 1). Reference categories*: ageold* (50 and more), *higheduc* (tertiary education up to 4 years and more than 4 years), *full-time* (= 1 if full-time employed), very long duration of experience in the unit (*vlongdur*). Country and sector fixed effects included. Robust standard errors in parentheses, clustered at country-sector level.

Source: Our own calculations based on data from the SES and WIOD, and Webb (2020).

**Table SA9. Determinants of log wages (additional variable: *coord*)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Software exposure | Robot exposure | AI exposure |
| *ln\_prod* | 0.098\*\*\* | 0.093\*\*\* | 0.099\*\*\* |
|  | (0.020) | (0.020) | (0.020) |
| *sex* | 0.145\*\*\* | 0.167\*\*\* | 0.097\*\*\* |
|  | (0.005) | (0.005) | (0.005) |
| *ageyoung* | –0.142\*\*\* | –0.148\*\*\* | –0.132\*\*\* |
|  | (0.012) | (0.010) | (0.012) |
| *ageaverage* | –0.008 | –0.014\*\*\* | –0.008 |
|  | (0.006) | (0.005) | (0.006) |
| *loweduc* | –0.492\*\*\* | –0.323\*\*\* | –0.453\*\*\* |
|  | (0.017) | (0.013) | (0.021) |
| *mededuc* | –0.357\*\*\* | –0.243\*\*\* | –0.328\*\*\* |
|  | (0.013) | (0.011) | (0.016) |
| *full-time* | 0.060\*\*\* | 0.041\*\*\* | 0.035\*\*\* |
|  | (0.011) | (0.010) | (0.010) |
| *shortdur* | –0.303\*\*\* | –0.270\*\*\* | –0.290\*\*\* |
|  | (0.018) | (0.014) | (0.019) |
| *meddur* | –0.213\*\*\* | –0.190\*\*\* | –0.206\*\*\* |
|  | (0.011) | (0.010) | (0.011) |
| *longdur* | –0.122\*\*\* | –0.107\*\*\* | –0.118\*\*\* |
|  | (0.009) | (0.008) | (0.008) |
| *public* | 0.038\*\* | 0.037\*\* | 0.038\*\*\* |
|  | (0.015) | (0.015) | (0.014) |
| *coord* | 0.171\*\*\* | 0.174\*\*\* | 0.200\*\*\* |
|  | (0.033) | (0.034) | (0.037) |
| *GVC* | –0.361\*\* | –0.456\*\*\* | –0.401\*\*\* |
|  | (0.150) | (0.127) | (0.154) |
| *Tech* | –0.002\*\*\* | –0.007\*\*\* | 0.004\*\*\* |
|  | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | 0.005\* | 0.007\*\*\* | 0.004\* |
|  | (0.003) | (0.002) | (0.002) |
| *R2* | 0.8 | 0.82 | 0.81 |
| *N* | 9 218 140 | 9 218 140 | 9 218 140 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included; variable coordination of wage setting (*coord*) takes a value of 1 for centralized or industry-level bargaining, and 0 for mixed industry and firm-level bargaining.

Source: Our own calculations based on data from the SES and WIOD, Visser (2019) and Webb (2020).

**Table SA10. Determinants of log wages (additional variable: *GOC*)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Software exposure | Robot exposure | AI exposure |
| *ln\_prod* | 0.128\*\*\* | 0.121\*\*\* | 0.133\*\*\* |
|  | (0.028) | (0.028) | (0.029) |
| *sex* | 0.136\*\*\* | 0.154\*\*\* | 0.094\*\*\* |
|  | (0.007) | (0.007) | (0.006) |
| *ageyoung* | –0.232\*\*\* | –0.228\*\*\* | –0.221\*\*\* |
|  | (0.015) | (0.014) | (0.015) |
| *ageaverage* | –0.052\*\*\* | –0.053\*\*\* | –0.051\*\*\* |
|  | (0.006) | (0.006) | (0.006) |
| *loweduc* | –0.462\*\*\* | –0.326\*\*\* | –0.418\*\*\* |
|  | (0.018) | (0.015) | (0.019) |
| *mededuc* | –0.316\*\*\* | –0.229\*\*\* | –0.279\*\*\* |
|  | (0.013) | (0.012) | (0.015) |
| *full-time* | 0.073\*\*\* | 0.052\*\*\* | 0.050\*\*\* |
|  | (0.011) | (0.011) | (0.011) |
| *shortdur* | –0.271\*\*\* | –0.250\*\*\* | –0.260\*\*\* |
|  | (0.014) | (0.013) | (0.014) |
| *meddur* | –0.208\*\*\* | –0.191\*\*\* | –0.202\*\*\* |
|  | (0.013) | (0.013) | (0.013) |
| *longdur* | –0.116\*\*\* | –0.104\*\*\* | –0.112\*\*\* |
|  | (0.010) | (0.010) | (0.010) |
| *public* | 0.057\*\*\* | 0.053\*\*\* | 0.061\*\*\* |
|  | (0.016) | (0.016) | (0.015) |
| *GOC* | –0.937\*\*\* | –0.951\*\*\* | –0.947\*\*\* |
|  | (0.045) | (0.046) | (0.047) |
| *GVC* | –0.22 | –0.341\*\* | –0.382\*\* |
|  | (0.157) | (0.148) | (0.171) |
| *Tech* | –0.001 | –0.006\*\*\* | 0.004\*\*\* |
|  | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | –0.002 | 0.001 | 0.001 |
|  | (0.002) | (0.002) | (0.002) |
| *R2* | 0.82 | 0.83 | 0.83 |
| *N* | 4 598 689 | 4 598 689 | 4 598 689 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included; variable *GOC* (general opening clauses in collective agreement) takes a value of 1 if agreements contain GOCs (renegotiation of contractual provisions at lower levels, under specified conditions) and of 0 if agreements contain no opening clauses.

Source: Our own calculations based on data from the SES and WIOD, Visser (2019) and Webb (2020).

**Table SA11. Determinants of log wages (additional variable: *barg3*)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Software exposure | Robot exposure | AI exposure |
| *ln\_prod* | 0.098\*\*\* | 0.093\*\*\* | 0.099\*\*\* |
|  | (0.020) | (0.020) | (0.020) |
| *sex* | 0.145\*\*\* | 0.167\*\*\* | 0.097\*\*\* |
|  | (0.005) | (0.005) | (0.005) |
| *ageyoung* | -0.142\*\*\* | -0.148\*\*\* | -0.132\*\*\* |
|  | (0.012) | (0.010) | (0.012) |
| *ageaverage* | -0.008 | -0.014\*\*\* | -0.008 |
|  | (0.006) | (0.005) | (0.006) |
| *loweduc* | -0.492\*\*\* | -0.323\*\*\* | -0.453\*\*\* |
|  | (0.017) | (0.013) | (0.021) |
| *mededuc* | -0.357\*\*\* | -0.243\*\*\* | -0.328\*\*\* |
|  | (0.013) | (0.011) | (0.016) |
| *full-time* | 0.060\*\*\* | 0.041\*\*\* | 0.035\*\*\* |
|  | (0.011) | (0.010) | (0.010) |
| *shortdur* | -0.303\*\*\* | -0.270\*\*\* | -0.290\*\*\* |
|  | (0.018) | (0.014) | (0.019) |
| *meddur* | -0.213\*\*\* | -0.190\*\*\* | -0.206\*\*\* |
|  | (0.011) | (0.010) | (0.011) |
| *longdur* | -0.122\*\*\* | -0.107\*\*\* | -0.118\*\*\* |
|  | (0.009) | (0.008) | (0.008) |
| *public* | 0.038\*\* | 0.037\*\* | 0.038\*\*\* |
|  | (0.015) | (0.015) | (0.014) |
| *barg3* | 0.085\*\*\* | 0.087\*\*\* | 0.100\*\*\* |
|  | (0.017) | (0.017) | (0.018) |
| *GVC* | -0.361\*\* | -0.456\*\*\* | -0.401\*\*\* |
|  | (0.150) | (0.127) | (0.154) |
| *Tech* | -0.002\*\*\* | -0.007\*\*\* | 0.004\*\*\* |
|  | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | 0.005\* | 0.007\*\*\* | 0.004\* |
|  | (0.003) | (0.002) | (0.002) |
| *R2* | 0.82 | 0.83 | 0.83 |
| *N* | 4 598 689 | 4 598 689 | 4 598 689 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included; variable *barg3* refers to the predominant level at which wage bargaining generally takes place: 1 = local or company level; 2 = industry level; 3 = central level.

Source: Own calculations based on data from the SES and WIOD, Visser (2019) and Webb (2020).

**Table SA12. Determinants of log wages (additional variable: *import*)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Software exposure | Robot exposure | AI exposure |
| *ln\_prod* | 0.098\*\*\* | 0.093\*\*\* | 0.099\*\*\* |
|  | (0.020) | (0.020) | (0.020) |
| *sex* | 0.145\*\*\* | 0.167\*\*\* | 0.097\*\*\* |
|  | (0.005) | (0.005) | (0.005) |
| *ageyoung* | –0.142\*\*\* | –0.148\*\*\* | –0.132\*\*\* |
|  | (0.012) | (0.010) | (0.012) |
| *ageaverage* | –0.008 | –0.014\*\*\* | –0.008 |
|  | (0.006) | (0.005) | (0.006) |
| *loweduc* | –0.492\*\*\* | –0.323\*\*\* | –0.453\*\*\* |
|  | (0.017) | (0.013) | (0.021) |
| *mededuc* | –0.357\*\*\* | –0.243\*\*\* | –0.328\*\*\* |
|  | (0.013) | (0.011) | (0.016) |
| *full-time* | 0.060\*\*\* | 0.041\*\*\* | 0.035\*\*\* |
|  | (0.011) | (0.010) | (0.010) |
| *shortdur* | –0.303\*\*\* | –0.270\*\*\* | –0.290\*\*\* |
|  | (0.018) | (0.014) | (0.019) |
| *meddur* | –0.213\*\*\* | –0.190\*\*\* | –0.206\*\*\* |
|  | (0.011) | (0.010) | (0.011) |
| *longdur* | –0.122\*\*\* | –0.107\*\*\* | –0.118\*\*\* |
|  | (0.009) | (0.008) | (0.008) |
| *public* | 0.038\*\* | 0.037\*\* | 0.038\*\*\* |
|  | (0.015) | (0.015) | (0.014) |
| *import* | 0.157\*\*\* | 0.160\*\*\* | 0.184\*\*\* |
|  | (0.031) | (0.031) | (0.034) |
| *GVC* | –0.361\*\* | –0.456\*\*\* | –0.401\*\*\* |
|  | (0.150) | (0.127) | (0.154) |
| *Tech* | –0.002\*\*\* | –0.007\*\*\* | 0.004\*\*\* |
|  | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | 0.005\* | 0.007\*\*\* | 0.004\* |
|  | (0.003) | (0.002) | (0.002) |
| *R2* | 0.8 | 0.82 | 0.81 |
| *N* | 9 218 140 | 9 218 140 | 9 218 140 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included.

Source: Our own calculations based on data from the SES and WIOD, Webb (2020) and the PWT (version 9.1).

**Table SA13. Determinants of log wages (additional variable: *export*)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Software exposure | Robot exposure | AI exposure |
| *ln\_prod* | 0.098\*\*\* | 0.093\*\*\* | 0.099\*\*\* |
|  | (0.020) | (0.020) | (0.020) |
| *sex* | 0.145\*\*\* | 0.167\*\*\* | 0.097\*\*\* |
|  | (0.005) | (0.005) | (0.005) |
| *ageyoung* | –0.142\*\*\* | –0.148\*\*\* | –0.132\*\*\* |
|  | (0.012) | (0.010) | (0.012) |
| *ageaverage* | –0.008 | –0.014\*\*\* | –0.008 |
|  | (0.006) | (0.005) | (0.006) |
| *loweduc* | –0.492\*\*\* | –0.323\*\*\* | –0.453\*\*\* |
|  | (0.017) | (0.013) | (0.021) |
| *mededuc* | –0.357\*\*\* | –0.243\*\*\* | –0.328\*\*\* |
|  | (0.013) | (0.011) | (0.016) |
| *full-time* | 0.060\*\*\* | 0.041\*\*\* | 0.035\*\*\* |
|  | (0.011) | (0.010) | (0.010) |
| *shortdur* | –0.303\*\*\* | –0.270\*\*\* | –0.290\*\*\* |
|  | (0.018) | (0.014) | (0.019) |
| *meddur* | –0.213\*\*\* | –0.190\*\*\* | –0.206\*\*\* |
|  | (0.011) | (0.010) | (0.011) |
| *longdur* | –0.122\*\*\* | –0.107\*\*\* | –0.118\*\*\* |
|  | (0.009) | (0.008) | (0.008) |
| *public* | 0.038\*\* | 0.037\*\* | 0.038\*\*\* |
|  | (0.015) | (0.015) | (0.014) |
| *export* | 0.158\*\*\* | 0.161\*\*\* | 0.186\*\*\* |
|  | (0.031) | (0.032) | (0.034) |
| *GVC* | –0.361\*\* | –0.456\*\*\* | –0.401\*\*\* |
|  | (0.150) | (0.127) | (0.154) |
| *Tech* | –0.002\*\*\* | –0.007\*\*\* | 0.004\*\*\* |
|  | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | 0.005\* | 0.007\*\*\* | 0.004\* |
|  | (0.003) | (0.002) | (0.002) |
| *R2* | 0.8 | 0.82 | 0.81 |
| *N* | 9 218 140 | 9 218 140 | 9 218 140 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included.

Source: Own calculation based on data from the SES and WIOD, Webb (2020) and the PWT (version 9.1).

**Table SA14. Determinants of log wages – *GVC* measured by GII**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Software exposure | Robot exposure | AI exposure |
| *ln\_prod* | 0.099\*\*\* | 0.093\*\*\* | 0.100\*\*\* |
|  | (0.020) | (0.020) | (0.020) |
| *sex* | 0.145\*\*\* | 0.167\*\*\* | 0.096\*\*\* |
|  | (0.005) | (0.005) | (0.005) |
| *ageyoung* | –0.142\*\*\* | –0.148\*\*\* | –0.132\*\*\* |
|  | (0.012) | (0.010) | (0.012) |
| *ageaverage* | –0.008 | –0.015\*\*\* | –0.008 |
|  | (0.006) | (0.005) | (0.006) |
| *loweduc* | –0.492\*\*\* | –0.322\*\*\* | –0.452\*\*\* |
|  | (0.017) | (0.013) | (0.021) |
| *mededuc* | –0.357\*\*\* | –0.243\*\*\* | –0.327\*\*\* |
|  | (0.013) | (0.011) | (0.016) |
| *full-time* | 0.061\*\*\* | 0.041\*\*\* | 0.035\*\*\* |
|  | (0.011) | (0.010) | (0.010) |
| *shortdur* | –0.303\*\*\* | –0.269\*\*\* | –0.289\*\*\* |
|  | (0.018) | (0.014) | (0.019) |
| *meddur* | –0.213\*\*\* | –0.190\*\*\* | –0.206\*\*\* |
|  | (0.011) | (0.010) | (0.011) |
| *longdur* | –0.121\*\*\* | –0.107\*\*\* | –0.118\*\*\* |
|  | (0.009) | (0.008) | (0.008) |
| *public* | 0.038\*\* | 0.036\*\* | 0.038\*\*\* |
|  | (0.015) | (0.015) | (0.014) |
| *GVC* | –0.176\* | –0.250\*\*\* | –0.222\*\* |
|  | (0.090) | (0.078) | (0.089) |
| *Tech* | –0.002\*\*\* | –0.007\*\*\* | 0.004\*\*\* |
|  | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | 0.002 | 0.004\*\*\* | 0.003\*\* |
|  | (0.001) | (0.001) | (0.001) |
| *R2* | 0.8 | 0.82 | 0.81 |
| *N* | 9 239 722 | 9 239 722 | 9 239 722 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included.

Source: Own calculation based on data from the SES and WIOD, and Webb (2020).

**Table SA15. Determinants of log wages – *Tech* measured by AI occupational impact (AIOI)**

|  |  |
| --- | --- |
|  | AIOI |
| *ln\_prod* | 0.092\*\*\* |
|  | (0.020) |
| *sex* | 0.158\*\*\* |
|  | (0.005) |
| *ageyoung* | –0.144\*\*\* |
|  | (0.010) |
| *ageaverage* | –0.014\*\*\* |
|  | (0.005) |
| *loweduc* | –0.308\*\*\* |
|  | (0.013) |
| *mededuc* | –0.237\*\*\* |
|  | (0.010) |
| *full-time* | 0.032\*\*\* |
|  | (0.010) |
| *shortdur* | –0.265\*\*\* |
|  | (0.015) |
| *meddur* | –0.188\*\*\* |
|  | (0.010) |
| *longdur* | –0.106\*\*\* |
|  | (0.008) |
| *public* | 0.038\*\* |
|  | (0.015) |
| *GVC* | –0.125 |
|  | (0.101) |
| *Tech* | 0.206\*\*\* |
|  | (0.013) |
| *GVC×Tech* | –0.195\*\*\* |
|  | (0.053) |
| *R2* | 0.82 |
| *N* | 9 218 140 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included.

Source: Our own calculations based on data from the SES and WIOD, and Felten, Raj and Seamans (2018, 2019).

**Table SA16. Determinants of log wages (additional variable: enterprise size)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Software exposure | Robot exposure | AI exposure |
| *ln\_prod* | 0.089\*\*\* | 0.080\*\*\* | 0.089\*\*\* |
|  | (0.020) | (0.021) | (0.020) |
| *sex* | 0.148\*\*\* | 0.168\*\*\* | 0.100\*\*\* |
|  | (0.006) | (0.006) | (0.005) |
| *ageyoung* | –0.149\*\*\* | –0.154\*\*\* | –0.138\*\*\* |
|  | (0.011) | (0.010) | (0.012) |
| *ageaverage* | –0.006 | –0.013\*\* | –0.006 |
|  | (0.006) | (0.006) | (0.006) |
| *loweduc* | –0.493\*\*\* | –0.324\*\*\* | –0.459\*\*\* |
|  | (0.019) | (0.014) | (0.023) |
| *mededuc* | –0.371\*\*\* | –0.255\*\*\* | –0.346\*\*\* |
|  | (0.014) | (0.011) | (0.017) |
| *full-time* | 0.056\*\*\* | 0.036\*\*\* | 0.034\*\*\* |
|  | (0.011) | (0.010) | (0.010) |
| *shortdur* | –0.276\*\*\* | –0.240\*\*\* | –0.263\*\*\* |
|  | (0.017) | (0.014) | (0.019) |
| *meddur* | –0.197\*\*\* | –0.170\*\*\* | –0.189\*\*\* |
|  | (0.009) | (0.008) | (0.009) |
| *longdur* | –0.106\*\*\* | –0.090\*\*\* | –0.102\*\*\* |
|  | (0.006) | (0.006) | (0.006) |
| *public* | 0.002 | 0.001 | 0.003 |
|  | (0.013) | (0.013) | (0.013) |
| *small* | –0.187\*\*\* | –0.187\*\*\* | –0.179\*\*\* |
|  | (0.011) | (0.012) | (0.011) |
| *medium* | –0.069\*\*\* | –0.067\*\*\* | –0.063\*\*\* |
|  | (0.009) | (0.008) | (0.009) |
| *GVC* | –0.052 | –0.281 | –0.397\* |
|  | (0.217) | (0.177) | (0.213) |
| *Tech* | –0.002\*\*\* | –0.007\*\*\* | 0.003\*\*\* |
|  | (0.001) | (0.001) | (0.001) |
| *GVC×Tech* | 0.003 | 0.007\*\*\* | 0.008\*\*\* |
|  | (0.003) | (0.003) | (0.003) |
| *R2* | 0.82 | 0.83 | 0.82 |
| *N* | 9 074 555 | 9 074 555 | 9 074 555 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: Enterprise size: *small* = 1–49 employees, *medium* = 50–249 employees. Reference categories: *large* (250 and more employees). Country and sector fixed effects included. No data for Cyprus, Luxembourg and Malta. Robust standard errors in parentheses, clustered at country-sector level.

Source: Our own calculations based on data from the SES and WIOD, and Webb (2020).

**Table SA17. Determinants of job quality EWCS indices – *Tech* measured as software exposure (additional variable: *coord*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.029\*\*\* | 0.008 | –0.074\*\*\* | –0.045\*\*\* | 0.018\*\* | –0.083\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.078\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.058\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.228\*\*\* | 0.017 | –0.171\*\*\* | –0.092\*\*\* | –0.055\*\*\* | 0.026\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.120\*\*\* | 0.033\*\* | –0.137\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.013\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.691\*\*\* | –0.095\*\*\* | –0.249\*\*\* | –0.131\*\*\* | –0.187\*\*\* | 0.152\*\*\* |
|  | (0.017) | (0.027) | (0.024) | (0.020) | (0.015) | (0.015) |
| *skill2* | –0.502\*\*\* | –0.070\*\*\* | –0.174\*\*\* | –0.053\*\*\* | –0.124\*\*\* | 0.053\*\*\* |
|  | (0.013) | (0.019) | (0.020) | (0.013) | (0.011) | (0.012) |
| *skill3* | –0.097\*\*\* | –0.015 | –0.001 | –0.021 | –0.056\*\*\* | 0.078\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.014) | (0.013) | (0.012) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.004 | 0.051\*\*\* | –0.072\*\*\* | –0.066\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *coord* | –0.086\*\*\* | –0.042 | 0.038\* | –0.127\*\*\* | –0.01 | 0.116\*\*\* |
|  | (0.020) | (0.047) | (0.022) | (0.023) | (0.030) | (0.027) |
| *GVC* | 0.625\*\*\* | 0.322 | 0.602\*\*\* | –0.004 | 0.085 | 0.332\*\* |
|  | (0.136) | (0.237) | (0.198) | (0.128) | (0.107) | (0.164) |
| *Tech* | 0.001 | 0.001 | –0.003\*\*\* | 0.001\* | 0 | 0 |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.013\*\*\* | –0.002 | –0.014\*\*\* | –0.001 | –0.004\*\* | –0.006\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.003) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA18. Determinants of job quality EWCS indices – *Tech* measured as robot exposure (additional variable: *coord*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.040\*\*\* | 0.016 | –0.062\*\*\* | –0.045\*\*\* | 0.021\*\*\* | –0.076\*\*\* |
|  | (0.008) | (0.013) | (0.012) | (0.010) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.002 | –0.080\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.036\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.057\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.007) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.216\*\*\* | 0.021 | –0.145\*\*\* | –0.095\*\*\* | –0.051\*\*\* | 0.033\*\*\* |
|  | (0.013) | (0.021) | (0.018) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.115\*\*\* | 0.035\*\* | –0.125\*\*\* | –0.051\*\*\* | –0.030\*\*\* | 0.017\*\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.537\*\*\* | –0.071\* | 0.198\*\*\* | –0.180\*\*\* | –0.150\*\*\* | 0.245\*\*\* |
|  | (0.023) | (0.039) | (0.040) | (0.028) | (0.020) | (0.022) |
| *skill2* | –0.419\*\*\* | –0.061\*\*\* | 0.086\*\*\* | –0.083\*\*\* | –0.103\*\*\* | 0.101\*\*\* |
|  | (0.016) | (0.023) | (0.026) | (0.016) | (0.013) | (0.013) |
| *skill3* | –0.058\*\*\* | –0.004 | 0.110\*\*\* | –0.032\*\* | –0.047\*\*\* | 0.103\*\*\* |
|  | (0.013) | (0.022) | (0.021) | (0.014) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.032\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.059\*\*\* | 0.003 | 0.054\*\*\* | –0.073\*\*\* | –0.067\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *coord* | –0.082\*\*\* | –0.042 | 0.044\*\* | –0.130\*\*\* | –0.009 | 0.113\*\*\* |
|  | (0.020) | (0.047) | (0.022) | (0.023) | (0.030) | (0.027) |
| *GVC* | 0.548\*\*\* | 0.332\* | 0.559\*\*\* | –0.129 | 0.092 | 0.097 |
|  | (0.121) | (0.189) | (0.175) | (0.101) | (0.104) | (0.136) |
| *Tech* | –0.001\*\*\* | 0 | –0.007\*\*\* | 0.001\* | 0 | –0.002\*\*\* |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.012\*\*\* | –0.003 | –0.013\*\*\* | 0.002 | –0.004\*\*\* | –0.001 |
|  | (0.002) | (0.003) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA19. Determinants of job quality EWCS indices – *Tech* measured as AI exposure (additional variable: *coord*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.022\*\*\* | 0.002 | –0.085\*\*\* | –0.045\*\*\* | 0.015\*\* | –0.087\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.008) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.077\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.014\*\* | –0.047\*\*\* | –0.059\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.232\*\*\* | 0.015 | –0.179\*\*\* | –0.092\*\*\* | –0.056\*\*\* | 0.023\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.121\*\*\* | 0.031\*\* | –0.138\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.012\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.717\*\*\* | –0.039 | –0.444\*\*\* | –0.092\*\*\* | –0.189\*\*\* | 0.144\*\*\* |
|  | (0.020) | (0.029) | (0.029) | (0.021) | (0.017) | (0.019) |
| *skill2* | –0.517\*\*\* | –0.035 | –0.284\*\*\* | –0.031\*\* | –0.125\*\*\* | 0.049\*\*\* |
|  | (0.016) | (0.022) | (0.024) | (0.014) | (0.013) | (0.016) |
| *skill3* | –0.109\*\*\* | –0.007 | –0.061\*\*\* | –0.013 | –0.058\*\*\* | 0.072\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.013) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.056\*\*\* | –0.007 | 0.036\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.005 | 0.051\*\*\* | –0.071\*\*\* | –0.066\*\*\* | 0.111\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *coord* | –0.091\*\*\* | –0.04 | 0.029 | –0.126\*\*\* | –0.012 | 0.113\*\*\* |
|  | (0.021) | (0.047) | (0.022) | (0.023) | (0.030) | (0.027) |
| *GVC* | 0.042 | 0.164 | –0.018 | 0.122 | –0.053 | 0.353\*\*\* |
|  | (0.147) | (0.253) | (0.166) | (0.131) | (0.115) | (0.125) |
| *Tech* | 0 | 0.001\* | –0.004\*\*\* | 0.001\*\*\* | 0 | 0.001\* |
|  | (0.001) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | 0 | 0.001 | –0.002 | –0.003 | –0.001 | –0.006\*\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA20. Determinants of job quality EWCS indices – *Tech* measured as software exposure (additional variable: *GOC*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | –0.000\* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.035\*\*\* | 0.018 | –0.059\*\*\* | –0.051\*\*\* | 0.019\*\* | –0.074\*\*\* |
|  | (0.009) | (0.017) | (0.015) | (0.013) | (0.009) | (0.009) |
| *ageyoung* | –0.019\* | –0.001 | –0.089\*\*\* | 0.072\*\*\* | 0.169\*\*\* | –0.040\*\*\* |
|  | (0.012) | (0.022) | (0.015) | (0.016) | (0.014) | (0.010) |
| *ageaverage* | 0.002 | –0.043\*\*\* | –0.079\*\*\* | 0.083\*\*\* | 0.059\*\*\* | –0.042\*\*\* |
|  | (0.008) | (0.015) | (0.009) | (0.010) | (0.009) | (0.007) |
| *loweduc* | –0.244\*\*\* | 0.034 | –0.194\*\*\* | –0.106\*\*\* | –0.044\*\*\* | 0.028\*\* |
|  | (0.017) | (0.025) | (0.025) | (0.020) | (0.014) | (0.014) |
| *mededuc* | –0.120\*\*\* | 0.049\*\*\* | –0.144\*\*\* | –0.060\*\*\* | –0.017 | 0.023\*\*\* |
|  | (0.011) | (0.019) | (0.015) | (0.011) | (0.012) | (0.009) |
| *skill1* | –0.669\*\*\* | –0.090\*\* | –0.224\*\*\* | –0.136\*\*\* | –0.165\*\*\* | 0.174\*\*\* |
|  | (0.021) | (0.035) | (0.034) | (0.028) | (0.018) | (0.018) |
| *skill2* | –0.486\*\*\* | –0.054\*\* | –0.145\*\*\* | –0.059\*\*\* | –0.123\*\*\* | 0.092\*\*\* |
|  | (0.016) | (0.027) | (0.028) | (0.018) | (0.013) | (0.014) |
| *skill3* | –0.079\*\*\* | –0.014 | 0.025 | –0.024 | –0.052\*\*\* | 0.097\*\*\* |
|  | (0.014) | (0.028) | (0.024) | (0.017) | (0.015) | (0.015) |
| *unlimited* | 0.114\*\*\* | 0.048\*\* | 0.007 | 0.023\* | 0.584\*\*\* | 0.037\*\*\* |
|  | (0.012) | (0.021) | (0.017) | (0.014) | (0.013) | (0.012) |
| *part-time* | –0.068\*\*\* | –0.008 | 0.051\*\*\* | –0.068\*\*\* | –0.076\*\*\* | 0.099\*\*\* |
|  | (0.010) | (0.019) | (0.016) | (0.015) | (0.010) | (0.011) |
| *GOC* | –0.188\*\*\* | 0.381\*\*\* | 0.125\*\*\* | –0.092\*\*\* | –0.193\*\*\* | –0.002 |
|  | (0.022) | (0.052) | (0.025) | (0.024) | (0.026) | (0.029) |
| *GVC* | 0.591\*\*\* | 0.181 | 0.387 | 0.173 | 0.188 | 0.131 |
|  | (0.184) | (0.318) | (0.259) | (0.160) | (0.163) | (0.209) |
| *Tech* | 0 | 0.001 | –0.004\*\*\* | 0.001\* | 0.001 | 0 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | –0.013\*\*\* | 0 | –0.009\*\* | –0.004 | –0.006\*\* | –0.002 |
|  | (0.003) | (0.005) | (0.004) | (0.003) | (0.003) | (0.003) |
| *N* | 14 109 | 13 978 | 14 109 | 14 078 | 14 107 | 14 109 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA21. Determinants of job quality EWCS indices – *Tech* measured as robot exposure (additional variable: *GOC*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | –0.000\* | –0.000\*\* | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.035\*\*\* | 0.045\*\*\* | 0.025\*\*\* | 0.018 | 0.026 | 0.013 |
|  | (0.009) | (0.009) | (0.009) | (0.017) | (0.017) | (0.017) |
| *ageyoung* | –0.019\* | –0.018 | –0.018 | –0.001 | –0.002 | 0 |
|  | (0.012) | (0.011) | (0.012) | (0.022) | (0.022) | (0.022) |
| *ageaverage* | 0.002 | 0.004 | 0.002 | –0.043\*\*\* | –0.043\*\*\* | –0.043\*\*\* |
|  | (0.008) | (0.008) | (0.008) | (0.015) | (0.015) | (0.015) |
| *loweduc* | –0.244\*\*\* | –0.227\*\*\* | –0.250\*\*\* | 0.034 | 0.04 | 0.033 |
|  | (0.017) | (0.018) | (0.018) | (0.025) | (0.026) | (0.025) |
| *mededuc* | –0.120\*\*\* | –0.113\*\*\* | –0.123\*\*\* | 0.049\*\*\* | 0.052\*\*\* | 0.048\*\* |
|  | (0.011) | (0.011) | (0.011) | (0.019) | (0.019) | (0.019) |
| *skill1* | –0.669\*\*\* | –0.494\*\*\* | –0.700\*\*\* | –0.090\*\* | –0.051 | –0.046 |
|  | (0.021) | (0.030) | (0.028) | (0.035) | (0.050) | (0.034) |
| *skill2* | –0.486\*\*\* | –0.391\*\*\* | –0.502\*\*\* | –0.054\*\* | –0.038 | –0.025 |
|  | (0.016) | (0.020) | (0.021) | (0.027) | (0.031) | (0.031) |
| *skill3* | –0.079\*\*\* | –0.035\*\* | –0.093\*\*\* | –0.014 | 0.002 | –0.007 |
|  | (0.014) | (0.015) | (0.015) | (0.028) | (0.029) | (0.027) |
| *unlimited* | 0.114\*\*\* | 0.115\*\*\* | 0.115\*\*\* | 0.048\*\* | 0.048\*\* | 0.048\*\* |
|  | (0.012) | (0.012) | (0.012) | (0.021) | (0.021) | (0.021) |
| *part-time* | –0.068\*\*\* | –0.069\*\*\* | –0.067\*\*\* | –0.008 | –0.009 | –0.006 |
|  | (0.010) | (0.010) | (0.010) | (0.019) | (0.019) | (0.019) |
| *GOC* | –0.188\*\*\* | –0.196\*\*\* | –0.189\*\*\* | 0.381\*\*\* | 0.383\*\*\* | 0.378\*\*\* |
|  | (0.022) | (0.023) | (0.023) | (0.052) | (0.052) | (0.052) |
| *GVC* | 0.591\*\*\* | 0.655\*\*\* | –0.123 | 0.181 | 0.198 | 0.078 |
|  | (0.184) | (0.181) | (0.222) | (0.318) | (0.244) | (0.358) |
| *Tech* | 0 | –0.002\*\* | –0.001 | 0.001 | –0.001 | 0.001 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| *GVC×Tech* | –0.013\*\*\* | –0.016\*\*\* | 0.002 | 0 | 0 | 0.002 |
|  | (0.003) | (0.003) | (0.003) | (0.005) | (0.004) |  |
| *N* | 14 109 | 14 109 | 14 109 | 13 978 | 13 978 | 13 978 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA22. Determinants of job quality EWCS indices – *Tech* measured as AI exposure (additional variable: *GOC*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.025\*\*\* | 0.013 | –0.069\*\*\* | –0.053\*\*\* | 0.015\* | –0.076\*\*\* |
|  | (0.009) | (0.017) | (0.015) | (0.012) | (0.009) | (0.008) |
| *ageyoung* | –0.018 | 0 | –0.088\*\*\* | 0.071\*\*\* | 0.169\*\*\* | –0.040\*\*\* |
|  | (0.012) | (0.022) | (0.015) | (0.016) | (0.014) | (0.010) |
| *ageaverage* | 0.002 | –0.043\*\*\* | –0.080\*\*\* | 0.082\*\*\* | 0.059\*\*\* | –0.042\*\*\* |
|  | (0.008) | (0.015) | (0.009) | (0.010) | (0.009) | (0.007) |
| *loweduc* | –0.250\*\*\* | 0.033 | –0.203\*\*\* | –0.107\*\*\* | –0.047\*\*\* | 0.027\* |
|  | (0.018) | (0.025) | (0.026) | (0.019) | (0.014) | (0.014) |
| *mededuc* | –0.123\*\*\* | 0.048\*\* | –0.147\*\*\* | –0.060\*\*\* | –0.018 | 0.023\*\* |
|  | (0.011) | (0.019) | (0.015) | (0.011) | (0.012) | (0.009) |
| *skill1* | –0.700\*\*\* | –0.046 | –0.429\*\*\* | –0.108\*\*\* | –0.161\*\*\* | 0.167\*\*\* |
|  | (0.028) | (0.034) | (0.038) | (0.029) | (0.021) | (0.022) |
| *skill2* | –0.502\*\*\* | –0.025 | –0.260\*\*\* | –0.043\*\* | –0.120\*\*\* | 0.089\*\*\* |
|  | (0.021) | (0.031) | (0.033) | (0.019) | (0.015) | (0.018) |
| *skill3* | –0.093\*\*\* | –0.007 | –0.035 | –0.018 | –0.054\*\*\* | 0.093\*\*\* |
|  | (0.015) | (0.027) | (0.024) | (0.017) | (0.015) | (0.016) |
| *unlimited* | 0.115\*\*\* | 0.048\*\* | 0.008 | 0.023\* | 0.584\*\*\* | 0.037\*\*\* |
|  | (0.012) | (0.021) | (0.017) | (0.014) | (0.013) | (0.012) |
| *part-time* | –0.067\*\*\* | –0.006 | 0.050\*\*\* | –0.067\*\*\* | –0.075\*\*\* | 0.100\*\*\* |
|  | (0.010) | (0.019) | (0.016) | (0.015) | (0.010) | (0.011) |
| *GOC* | –0.189\*\*\* | 0.378\*\*\* | 0.128\*\*\* | –0.089\*\*\* | –0.192\*\*\* | 0.001 |
|  | (0.023) | (0.052) | (0.026) | (0.025) | (0.026) | (0.028) |
| *GVC* | –0.123 | 0.078 | –0.051 | 0.279 | 0.044 | 0.320\* |
|  | (0.222) | (0.358) | (0.219) | (0.170) | (0.170) | (0.173) |
| *Tech* | –0.001 | 0.001 | –0.005\*\*\* | 0.001\*\* | 0 | 0.001 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.000) | (0.001) |
| *GVC×Tech* | 0.002 | 0.002 | 0 | –0.005\*\* | –0.002 | –0.005\*\* |
|  | (0.003) | (0.005) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 14 109 | 13 978 | 14 109 | 14 078 | 14 107 | 14 109 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA23. Determinants of job quality EWCS indices – *Tech* measured as software exposure (additional variable: *barg3*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.029\*\*\* | 0.008 | –0.074\*\*\* | –0.045\*\*\* | 0.018\*\* | –0.083\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.078\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.058\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.228\*\*\* | 0.017 | –0.171\*\*\* | –0.092\*\*\* | –0.055\*\*\* | 0.026\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.120\*\*\* | 0.033\*\* | –0.137\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.013\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.691\*\*\* | –0.095\*\*\* | –0.249\*\*\* | –0.131\*\*\* | –0.187\*\*\* | 0.152\*\*\* |
|  | (0.017) | (0.027) | (0.024) | (0.020) | (0.015) | (0.015) |
| *skill2* | –0.502\*\*\* | –0.070\*\*\* | –0.174\*\*\* | –0.053\*\*\* | –0.124\*\*\* | 0.053\*\*\* |
|  | (0.013) | (0.019) | (0.020) | (0.013) | (0.011) | (0.012) |
| *skill3* | –0.097\*\*\* | –0.015 | –0.001 | –0.021 | –0.056\*\*\* | 0.078\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.014) | (0.013) | (0.012) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.004 | 0.051\*\*\* | –0.072\*\*\* | –0.066\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *barg3* | –0.086\*\*\* | –0.042 | 0.038\* | –0.127\*\*\* | –0.01 | 0.116\*\*\* |
|  | (0.020) | (0.047) | (0.022) | (0.023) | (0.030) | (0.027) |
| *GVC* | 0.625\*\*\* | 0.322 | 0.602\*\*\* | –0.004 | 0.085 | 0.332\*\* |
|  | (0.136) | (0.237) | (0.198) | (0.128) | (0.107) | (0.164) |
| *Tech* | 0.001 | 0.001 | –0.003\*\*\* | 0.001\* | 0 | 0 |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.013\*\*\* | –0.002 | –0.014\*\*\* | –0.001 | –0.004\*\* | –0.006\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.003) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA24. Determinants of job quality EWCS indices – *Tech* measured as robot exposure (additional variable: *barg3*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.040\*\*\* | 0.016 | –0.062\*\*\* | –0.045\*\*\* | 0.021\*\*\* | –0.076\*\*\* |
|  | (0.008) | (0.013) | (0.012) | (0.010) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.002 | –0.080\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.036\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.057\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.007) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.216\*\*\* | 0.021 | –0.145\*\*\* | –0.095\*\*\* | –0.051\*\*\* | 0.033\*\*\* |
|  | (0.013) | (0.021) | (0.018) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.115\*\*\* | 0.035\*\* | –0.125\*\*\* | –0.051\*\*\* | –0.030\*\*\* | 0.017\*\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.537\*\*\* | –0.071\* | 0.198\*\*\* | –0.180\*\*\* | –0.150\*\*\* | 0.245\*\*\* |
|  | (0.023) | (0.039) | (0.040) | (0.028) | (0.020) | (0.022) |
| *skill2* | –0.419\*\*\* | –0.061\*\*\* | 0.086\*\*\* | –0.083\*\*\* | –0.103\*\*\* | 0.101\*\*\* |
|  | (0.016) | (0.023) | (0.026) | (0.016) | (0.013) | (0.013) |
| *skill3* | –0.058\*\*\* | –0.004 | 0.110\*\*\* | –0.032\*\* | –0.047\*\*\* | 0.103\*\*\* |
|  | (0.013) | (0.022) | (0.021) | (0.014) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.032\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.059\*\*\* | 0.003 | 0.054\*\*\* | –0.073\*\*\* | –0.067\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *barg3* | –0.041\*\*\* | –0.021 | 0.022\*\* | –0.065\*\*\* | –0.004 | 0.056\*\*\* |
|  | (0.010) | (0.023) | (0.011) | (0.012) | (0.015) | (0.014) |
| *GVC* | 0.548\*\*\* | 0.332\* | 0.559\*\*\* | –0.129 | 0.092 | 0.097 |
|  | (0.121) | (0.189) | (0.175) | (0.101) | (0.104) | (0.136) |
| *Tech* | –0.001\*\*\* | 0 | –0.007\*\*\* | 0.001\* | 0 | –0.002\*\*\* |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.012\*\*\* | –0.003 | –0.013\*\*\* | 0.002 | –0.004\*\*\* | –0.001 |
|  | (0.002) | (0.003) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA25. Determinants of job quality EWCS indices – *Tech* measured as AI exposure (additional variable: *barg3*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.022\*\*\* | 0.002 | –0.085\*\*\* | –0.045\*\*\* | 0.015\*\* | –0.087\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.008) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.077\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.014\*\* | –0.047\*\*\* | –0.059\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.232\*\*\* | 0.015 | –0.179\*\*\* | –0.092\*\*\* | –0.056\*\*\* | 0.023\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.121\*\*\* | 0.031\*\* | –0.138\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.012\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.717\*\*\* | –0.039 | –0.444\*\*\* | –0.092\*\*\* | –0.189\*\*\* | 0.144\*\*\* |
|  | (0.020) | (0.029) | (0.029) | (0.021) | (0.017) | (0.019) |
| *skill2* | –0.517\*\*\* | –0.035 | –0.284\*\*\* | –0.031\*\* | –0.125\*\*\* | 0.049\*\*\* |
|  | (0.016) | (0.022) | (0.024) | (0.014) | (0.013) | (0.016) |
| *skill3* | –0.109\*\*\* | –0.007 | –0.061\*\*\* | –0.013 | –0.058\*\*\* | 0.072\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.013) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.056\*\*\* | –0.007 | 0.036\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.005 | 0.051\*\*\* | –0.071\*\*\* | –0.066\*\*\* | 0.111\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *barg3* | –0.046\*\*\* | –0.02 | 0.015 | –0.063\*\*\* | –0.006 | 0.057\*\*\* |
|  | (0.011) | (0.024) | (0.011) | (0.011) | (0.015) | (0.013) |
| *GVC* | 0.042 | 0.164 | –0.018 | 0.122 | –0.053 | 0.353\*\*\* |
|  | (0.147) | (0.253) | (0.166) | (0.131) | (0.115) | (0.125) |
| *Tech* | 0 | 0.001\* | –0.004\*\*\* | 0.001\*\*\* | 0 | 0.001\* |
|  | (0.001) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | 0 | 0.001 | –0.002 | –0.003 | –0.001 | –0.006\*\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Webb (2020).

**Table SA26. Determinants of job quality EWCS indices – *Tech* measured as software exposure, *GVC* measured by GII**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.030\*\*\* | 0.008 | –0.074\*\*\* | –0.045\*\*\* | 0.018\*\* | –0.083\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.078\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.058\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.228\*\*\* | 0.016 | –0.170\*\*\* | –0.091\*\*\* | –0.055\*\*\* | 0.026\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.120\*\*\* | 0.032\*\* | –0.137\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.013\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.693\*\*\* | –0.096\*\*\* | –0.251\*\*\* | –0.131\*\*\* | –0.187\*\*\* | 0.152\*\*\* |
|  | (0.017) | (0.027) | (0.024) | (0.020) | (0.015) | (0.015) |
| *skill2* | –0.503\*\*\* | –0.070\*\*\* | –0.174\*\*\* | –0.054\*\*\* | –0.123\*\*\* | 0.053\*\*\* |
|  | (0.013) | (0.019) | (0.020) | (0.013) | (0.011) | (0.012) |
| *skill3* | –0.097\*\*\* | –0.015 | –0.001 | –0.022 | –0.056\*\*\* | 0.078\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.014) | (0.013) | (0.012) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.032\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.005 | 0.051\*\*\* | –0.072\*\*\* | –0.066\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *GVC* | 0.404\*\*\* | 0.247\* | 0.451\*\*\* | –0.055 | 0.047 | 0.218\*\* |
|  | (0.077) | (0.130) | (0.113) | (0.078) | (0.064) | (0.091) |
| *Tech* | 0.001\* | 0.001\*\* | –0.003\*\*\* | 0.001 | 0 | 0.001 |
|  | (0.000) | (0.001) | (0.001) | (0.001) | (0.000) | (0.000) |
| *GVC×Tech* | –0.008\*\*\* | –0.003 | –0.010\*\*\* | 0 | –0.002\*\* | –0.004\*\*\* |
|  | (0.001) | (0.002) | (0.002) | (0.001) | (0.001) | (0.001) |
| *N* | 22 554 | 22 380 | 22 553 | 22 508 | 22 551 | 22 554 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, and Webb (2020).

**Table SA27. Determinants of job quality EWCS indices – *Tech* measured as robot exposure, *GVC* measured by GII**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.040\*\*\* | 0.016 | –0.062\*\*\* | –0.045\*\*\* | 0.021\*\*\* | –0.076\*\*\* |
|  | (0.008) | (0.013) | (0.012) | (0.010) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.002 | –0.080\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.036\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.057\*\*\* | 0.074\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.007) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.216\*\*\* | 0.02 | –0.146\*\*\* | –0.094\*\*\* | –0.052\*\*\* | 0.033\*\*\* |
|  | (0.013) | (0.021) | (0.018) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.115\*\*\* | 0.034\*\* | –0.125\*\*\* | –0.051\*\*\* | –0.030\*\*\* | 0.017\*\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.544\*\*\* | –0.077\*\* | 0.191\*\*\* | –0.178\*\*\* | –0.152\*\*\* | 0.243\*\*\* |
|  | (0.023) | (0.039) | (0.040) | (0.028) | (0.020) | (0.022) |
| *skill2* | –0.422\*\*\* | –0.063\*\*\* | 0.083\*\*\* | –0.082\*\*\* | –0.104\*\*\* | 0.100\*\*\* |
|  | (0.016) | (0.023) | (0.026) | (0.016) | (0.013) | (0.013) |
| *skill3* | –0.061\*\*\* | –0.006 | 0.107\*\*\* | –0.031\*\* | –0.048\*\*\* | 0.102\*\*\* |
|  | (0.013) | (0.023) | (0.021) | (0.014) | (0.013) | (0.013) |
| *unlimited* | 0.120\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.032\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.060\*\*\* | 0.003 | 0.054\*\*\* | –0.073\*\*\* | –0.067\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *GVC* | 0.346\*\*\* | 0.237\*\* | 0.372\*\*\* | –0.124\*\* | 0.046 | 0.083 |
|  | (0.065) | (0.111) | (0.095) | (0.063) | (0.061) | (0.078) |
| *Tech* | –0.001\*\*\* | 0 | –0.007\*\*\* | 0.001 | 0 | –0.001\*\*\* |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.007\*\*\* | –0.003\* | –0.008\*\*\* | 0.002\* | –0.002\*\*\* | –0.001 |
|  | (0.001) | (0.002) | (0.001) | (0.001) | (0.001) | (0.001) |
| *N* | 22 554 | 22 380 | 22 553 | 22 508 | 22 551 | 22 554 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, and Webb (2020).

**Table SA28. Determinants of job quality EWCS indices – *Tech* measured as AI exposure, *GVC* measured by GII**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.022\*\*\* | 0.002 | –0.085\*\*\* | –0.045\*\*\* | 0.016\*\* | –0.086\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.008) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.077\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.014\*\* | –0.047\*\*\* | –0.059\*\*\* | 0.075\*\*\* | 0.069\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.233\*\*\* | 0.014 | –0.179\*\*\* | –0.091\*\*\* | –0.056\*\*\* | 0.024\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.121\*\*\* | 0.031\*\* | –0.138\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.013\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.717\*\*\* | –0.039 | –0.445\*\*\* | –0.094\*\*\* | –0.189\*\*\* | 0.144\*\*\* |
|  | (0.020) | (0.029) | (0.029) | (0.021) | (0.017) | (0.019) |
| *skill2* | –0.517\*\*\* | –0.035 | –0.285\*\*\* | –0.032\*\* | –0.125\*\*\* | 0.049\*\*\* |
|  | (0.016) | (0.022) | (0.024) | (0.014) | (0.013) | (0.015) |
| *skill3* | –0.109\*\*\* | –0.007 | –0.061\*\*\* | –0.013 | –0.058\*\*\* | 0.073\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.013) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.056\*\*\* | –0.007 | 0.037\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.006 | 0.052\*\*\* | –0.071\*\*\* | –0.066\*\*\* | 0.112\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *GVC* | 0.037 | 0.091 | 0.036 | 0.06 | –0.05 | 0.197\*\*\* |
|  | (0.085) | (0.140) | (0.098) | (0.076) | (0.067) | (0.072) |
| *Tech* | 0 | 0.001\* | –0.004\*\*\* | 0.001\*\*\* | 0 | 0.001\* |
|  | (0.001) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | 0 | 0.001 | –0.002 | –0.002\* | 0 | –0.003\*\*\* |
|  | (0.001) | (0.002) | (0.001) | (0.001) | (0.001) | (0.001) |
| *N* | 22 554 | 22 380 | 22 553 | 22 508 | 22 551 | 22 554 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, and Webb (2020).

**Table SA29. Determinants of job quality EWCS indices – *Tech* measured as software exposure (additional variable: *import*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.029\*\*\* | 0.008 | –0.074\*\*\* | –0.045\*\*\* | 0.018\*\* | –0.083\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.078\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.058\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.228\*\*\* | 0.017 | –0.171\*\*\* | –0.092\*\*\* | –0.055\*\*\* | 0.026\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.120\*\*\* | 0.033\*\* | –0.137\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.013\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.691\*\*\* | –0.095\*\*\* | –0.249\*\*\* | –0.131\*\*\* | –0.187\*\*\* | 0.152\*\*\* |
|  | (0.017) | (0.027) | (0.024) | (0.020) | (0.015) | (0.015) |
| *skill2* | –0.502\*\*\* | –0.070\*\*\* | –0.174\*\*\* | –0.053\*\*\* | –0.124\*\*\* | 0.053\*\*\* |
|  | (0.013) | (0.019) | (0.020) | (0.013) | (0.011) | (0.012) |
| *skill3* | –0.097\*\*\* | –0.015 | –0.001 | –0.021 | –0.056\*\*\* | 0.078\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.014) | (0.013) | (0.012) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.004 | 0.051\*\*\* | –0.072\*\*\* | –0.066\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *import* | –0.079\*\*\* | –0.038 | 0.035\* | –0.117\*\*\* | –0.01 | 0.106\*\*\* |
|  | (0.018) | (0.043) | (0.020) | (0.021) | (0.028) | (0.025) |
| *GVC* | 0.625\*\*\* | 0.322 | 0.602\*\*\* | –0.004 | 0.085 | 0.332\*\* |
|  | (0.136) | (0.237) | (0.198) | (0.128) | (0.107) | (0.164) |
| *Tech* | 0.001 | 0.001 | –0.003\*\*\* | 0.001\* | 0 | 0 |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.013\*\*\* | –0.002 | –0.014\*\*\* | –0.001 | –0.004\*\* | –0.006\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.003) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Webb (2020) and the PWT (version 9.1).

**Table SA30. Determinants of job quality EWCS indices – *Tech* measured as robot exposure (additional variable: *import*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.040\*\*\* | 0.016 | –0.062\*\*\* | –0.045\*\*\* | 0.021\*\*\* | –0.076\*\*\* |
|  | (0.008) | (0.013) | (0.012) | (0.010) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.002 | –0.080\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.036\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.057\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.007) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.216\*\*\* | 0.021 | –0.145\*\*\* | –0.095\*\*\* | –0.051\*\*\* | 0.033\*\*\* |
|  | (0.013) | (0.021) | (0.018) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.115\*\*\* | 0.035\*\* | –0.125\*\*\* | –0.051\*\*\* | –0.030\*\*\* | 0.017\*\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.537\*\*\* | –0.071\* | 0.198\*\*\* | –0.180\*\*\* | –0.150\*\*\* | 0.245\*\*\* |
|  | (0.023) | (0.039) | (0.040) | (0.028) | (0.020) | (0.022) |
| *skill2* | –0.419\*\*\* | –0.061\*\*\* | 0.086\*\*\* | –0.083\*\*\* | –0.103\*\*\* | 0.101\*\*\* |
|  | (0.016) | (0.023) | (0.026) | (0.016) | (0.013) | (0.013) |
| *skill3* | –0.058\*\*\* | –0.004 | 0.110\*\*\* | –0.032\*\* | –0.047\*\*\* | 0.103\*\*\* |
|  | (0.013) | (0.022) | (0.021) | (0.014) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.032\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.059\*\*\* | 0.003 | 0.054\*\*\* | –0.073\*\*\* | –0.067\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *import* | –0.076\*\*\* | –0.038 | 0.041\*\* | –0.119\*\*\* | –0.008 | 0.104\*\*\* |
|  | (0.018) | (0.043) | (0.020) | (0.022) | (0.028) | (0.025) |
| *GVC* | 0.548\*\*\* | 0.332\* | 0.559\*\*\* | –0.129 | 0.092 | 0.097 |
|  | (0.121) | (0.189) | (0.175) | (0.101) | (0.104) | (0.136) |
| *Tech* | –0.001\*\*\* | 0 | –0.007\*\*\* | 0.001\* | 0 | –0.002\*\*\* |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.012\*\*\* | –0.003 | –0.013\*\*\* | 0.002 | –0.004\*\*\* | –0.001 |
|  | (0.002) | (0.003) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Webb (2020) and the PWT (version 9.1).

**Table SA31 Determinants of job quality EWCS indices – *Tech* measured as AI exposure (additional variable: *import*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.022\*\*\* | 0.002 | –0.085\*\*\* | –0.045\*\*\* | 0.015\*\* | –0.087\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.008) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.077\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.014\*\* | –0.047\*\*\* | –0.059\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.232\*\*\* | 0.015 | –0.179\*\*\* | –0.092\*\*\* | –0.056\*\*\* | 0.023\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.121\*\*\* | 0.031\*\* | –0.138\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.012\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.717\*\*\* | –0.039 | –0.444\*\*\* | –0.092\*\*\* | –0.189\*\*\* | 0.144\*\*\* |
|  | (0.020) | (0.029) | (0.029) | (0.021) | (0.017) | (0.019) |
| *skill2* | –0.517\*\*\* | –0.035 | –0.284\*\*\* | –0.031\*\* | –0.125\*\*\* | 0.049\*\*\* |
|  | (0.016) | (0.022) | (0.024) | (0.014) | (0.013) | (0.016) |
| *skill3* | –0.109\*\*\* | –0.007 | –0.061\*\*\* | –0.013 | –0.058\*\*\* | 0.072\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.013) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.056\*\*\* | –0.007 | 0.036\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.005 | 0.051\*\*\* | –0.071\*\*\* | –0.066\*\*\* | 0.111\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *import* | –0.084\*\*\* | –0.037 | 0.027 | –0.116\*\*\* | –0.011 | 0.104\*\*\* |
|  | (0.019) | (0.043) | (0.020) | (0.021) | (0.028) | (0.025) |
| *GVC* | 0.042 | 0.164 | –0.018 | 0.122 | –0.053 | 0.353\*\*\* |
|  | (0.147) | (0.253) | (0.166) | (0.131) | (0.115) | (0.125) |
| *Tech* | 0 | 0.001\* | –0.004\*\*\* | 0.001\*\*\* | 0 | 0.001\* |
|  | (0.001) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | 0 | 0.001 | –0.002 | –0.003 | –0.001 | –0.006\*\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Webb (2020) and the PWT (version 9.1).

**Table SA32. Determinants of job quality EWCS indices – *Tech* measured as software exposure (additional variable: *export*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.029\*\*\* | 0.008 | –0.074\*\*\* | –0.045\*\*\* | 0.018\*\* | –0.083\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.078\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.058\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.228\*\*\* | 0.017 | –0.171\*\*\* | –0.092\*\*\* | –0.055\*\*\* | 0.026\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.120\*\*\* | 0.033\*\* | –0.137\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.013\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.691\*\*\* | –0.095\*\*\* | –0.249\*\*\* | –0.131\*\*\* | –0.187\*\*\* | 0.152\*\*\* |
|  | (0.017) | (0.027) | (0.024) | (0.020) | (0.015) | (0.015) |
| *skill2* | –0.502\*\*\* | –0.070\*\*\* | –0.174\*\*\* | –0.053\*\*\* | –0.124\*\*\* | 0.053\*\*\* |
|  | (0.013) | (0.019) | (0.020) | (0.013) | (0.011) | (0.012) |
| *skill3* | –0.097\*\*\* | –0.015 | –0.001 | –0.021 | –0.056\*\*\* | 0.078\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.014) | (0.013) | (0.012) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.004 | 0.051\*\*\* | –0.072\*\*\* | –0.066\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *export* | –0.080\*\*\* | –0.039 | 0.036\* | –0.118\*\*\* | –0.01 | 0.107\*\*\* |
|  | (0.019) | (0.044) | (0.020) | (0.022) | (0.028) | (0.025) |
| *GVC* | 0.625\*\*\* | 0.322 | 0.602\*\*\* | –0.004 | 0.085 | 0.332\*\* |
|  | (0.136) | (0.237) | (0.198) | (0.128) | (0.107) | (0.164) |
| *Tech* | 0.001 | 0.001 | –0.003\*\*\* | 0.001\* | 0 | 0 |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.013\*\*\* | –0.002 | –0.014\*\*\* | –0.001 | –0.004\*\* | –0.006\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.003) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Webb (2020) and the PWT (version 9.1).

**Table SA33. Determinants of job quality EWCS indices – *Tech* measured as robot exposure (additional variable: *export*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.040\*\*\* | 0.016 | –0.062\*\*\* | –0.045\*\*\* | 0.021\*\*\* | –0.076\*\*\* |
|  | (0.008) | (0.013) | (0.012) | (0.010) | (0.007) | (0.007) |
| *ageyoung* | 0.003 | 0.002 | –0.080\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.036\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.015\*\* | –0.047\*\*\* | –0.057\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.007) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.216\*\*\* | 0.021 | –0.145\*\*\* | –0.095\*\*\* | –0.051\*\*\* | 0.033\*\*\* |
|  | (0.013) | (0.021) | (0.018) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.115\*\*\* | 0.035\*\* | –0.125\*\*\* | –0.051\*\*\* | –0.030\*\*\* | 0.017\*\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.537\*\*\* | –0.071\* | 0.198\*\*\* | –0.180\*\*\* | –0.150\*\*\* | 0.245\*\*\* |
|  | (0.023) | (0.039) | (0.040) | (0.028) | (0.020) | (0.022) |
| *skill2* | –0.419\*\*\* | –0.061\*\*\* | 0.086\*\*\* | –0.083\*\*\* | –0.103\*\*\* | 0.101\*\*\* |
|  | (0.016) | (0.023) | (0.026) | (0.016) | (0.013) | (0.013) |
| *skill3* | –0.058\*\*\* | –0.004 | 0.110\*\*\* | –0.032\*\* | –0.047\*\*\* | 0.103\*\*\* |
|  | (0.013) | (0.022) | (0.021) | (0.014) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.057\*\*\* | –0.008 | 0.037\*\*\* | 0.583\*\*\* | 0.032\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.059\*\*\* | 0.003 | 0.054\*\*\* | –0.073\*\*\* | –0.067\*\*\* | 0.110\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *export* | –0.076\*\*\* | –0.039 | 0.041\*\* | –0.120\*\*\* | –0.008 | 0.105\*\*\* |
|  | (0.019) | (0.044) | (0.020) | (0.022) | (0.028) | (0.025) |
| *GVC* | 0.548\*\*\* | 0.332\* | 0.559\*\*\* | –0.129 | 0.092 | 0.097 |
|  | (0.121) | (0.189) | (0.175) | (0.101) | (0.104) | (0.136) |
| *Tech* | –0.001\*\*\* | 0 | –0.007\*\*\* | 0.001\* | 0 | –0.002\*\*\* |
|  | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | –0.012\*\*\* | –0.003 | –0.013\*\*\* | 0.002 | –0.004\*\*\* | –0.001 |
|  | (0.002) | (0.003) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Note: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Webb (2020) and the PWT (version 9.1).

**Table SA34. Determinants of job quality EWCS indices, *Tech* measured as AI exposure (additional variable: *export*)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.022\*\*\* | 0.002 | –0.085\*\*\* | –0.045\*\*\* | 0.015\*\* | –0.087\*\*\* |
|  | (0.007) | (0.013) | (0.012) | (0.009) | (0.008) | (0.007) |
| *ageyoung* | 0.003 | 0.003 | –0.077\*\*\* | 0.077\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.014\*\* | –0.047\*\*\* | –0.059\*\*\* | 0.075\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.008) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.232\*\*\* | 0.015 | –0.179\*\*\* | –0.092\*\*\* | –0.056\*\*\* | 0.023\*\* |
|  | (0.013) | (0.020) | (0.019) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.121\*\*\* | 0.031\*\* | –0.138\*\*\* | –0.050\*\*\* | –0.031\*\*\* | 0.012\* |
|  | (0.009) | (0.015) | (0.011) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.717\*\*\* | –0.039 | –0.444\*\*\* | –0.092\*\*\* | –0.189\*\*\* | 0.144\*\*\* |
|  | (0.020) | (0.029) | (0.029) | (0.021) | (0.017) | (0.019) |
| *skill2* | –0.517\*\*\* | –0.035 | –0.284\*\*\* | –0.031\*\* | –0.125\*\*\* | 0.049\*\*\* |
|  | (0.016) | (0.022) | (0.024) | (0.014) | (0.013) | (0.016) |
| *skill3* | –0.109\*\*\* | –0.007 | –0.061\*\*\* | –0.013 | –0.058\*\*\* | 0.072\*\*\* |
|  | (0.012) | (0.021) | (0.018) | (0.013) | (0.013) | (0.013) |
| *unlimited* | 0.121\*\*\* | 0.056\*\*\* | –0.007 | 0.036\*\*\* | 0.583\*\*\* | 0.033\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.005 | 0.051\*\*\* | –0.071\*\*\* | –0.066\*\*\* | 0.111\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *export* | –0.085\*\*\* | –0.037 | 0.027 | –0.117\*\*\* | –0.011 | 0.105\*\*\* |
|  | (0.020) | (0.044) | (0.020) | (0.021) | (0.028) | (0.025) |
| *GVC* | 0.042 | 0.164 | –0.018 | 0.122 | –0.053 | 0.353\*\*\* |
|  | (0.147) | (0.253) | (0.166) | (0.131) | (0.115) | (0.125) |
| *Tech* | 0 | 0.001\* | –0.004\*\*\* | 0.001\*\*\* | 0 | 0.001\* |
|  | (0.001) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| *GVC×Tech* | 0 | 0.001 | –0.002 | –0.003 | –0.001 | –0.006\*\*\* |
|  | (0.002) | (0.004) | (0.003) | (0.002) | (0.002) | (0.002) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Webb (2020) and the PWT (version 9.1).

**Table SA35. Determinants of job quality EWCS indices – *Tech* measured as AIOI**

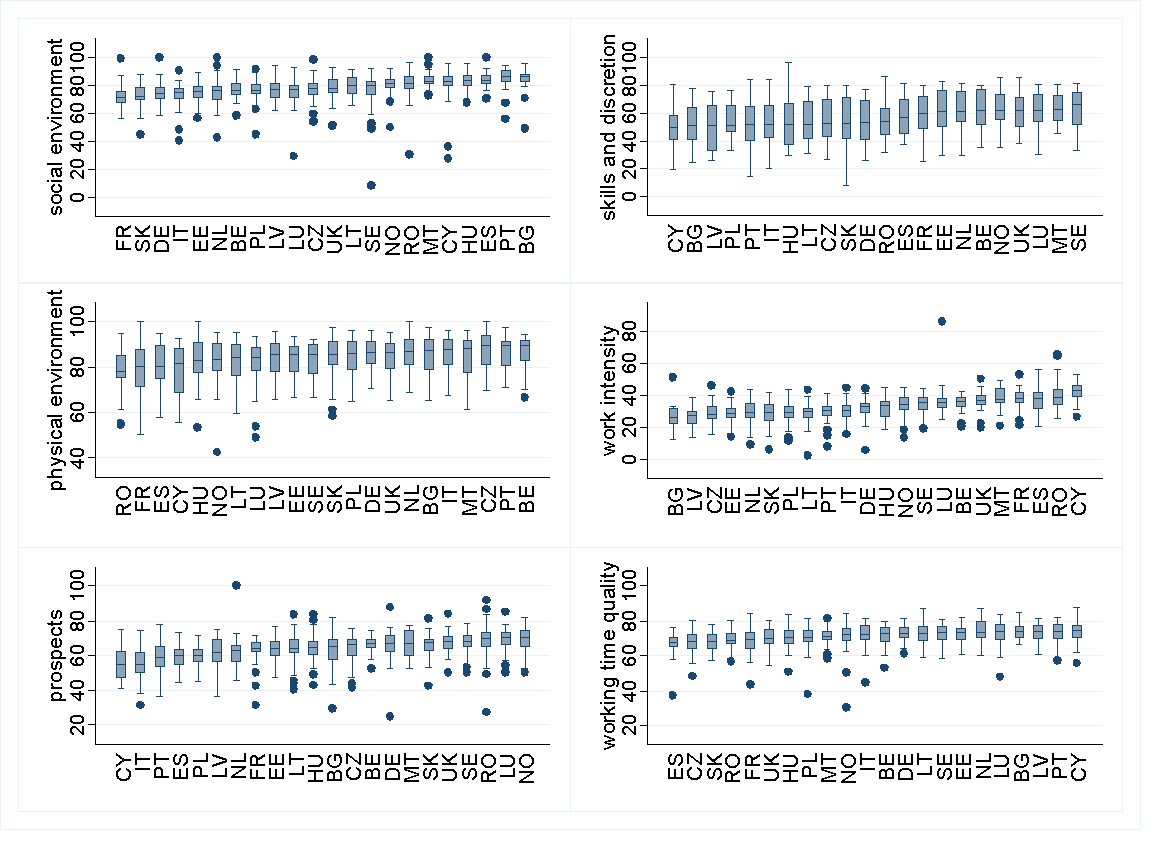
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Dependent variable: Job quality EWCS indices | | | | | |
|  | Social environment | Skills and discretion | Physical environment | Work intensity | Prospects | Working time |
| *ln\_prod* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | –0.000\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *sex* | 0.041\*\*\* | 0.024\* | –0.066\*\*\* | –0.044\*\*\* | 0.021\*\*\* | –0.072\*\*\* |
|  | (0.008) | (0.013) | (0.011) | (0.010) | (0.007) | (0.007) |
| *ageyoung* | 0.004 | 0.001 | –0.075\*\*\* | 0.076\*\*\* | 0.188\*\*\* | –0.035\*\*\* |
|  | (0.010) | (0.018) | (0.012) | (0.011) | (0.011) | (0.008) |
| *ageaverage* | 0.016\*\* | –0.047\*\*\* | –0.056\*\*\* | 0.074\*\*\* | 0.070\*\*\* | –0.036\*\*\* |
|  | (0.007) | (0.012) | (0.007) | (0.008) | (0.007) | (0.006) |
| *loweduc* | –0.206\*\*\* | 0.03 | –0.125\*\*\* | –0.096\*\*\* | –0.048\*\*\* | 0.042\*\*\* |
|  | (0.013) | (0.021) | (0.017) | (0.015) | (0.011) | (0.011) |
| *mededuc* | –0.110\*\*\* | 0.040\*\*\* | –0.114\*\*\* | –0.052\*\*\* | –0.028\*\*\* | 0.022\*\*\* |
|  | (0.009) | (0.015) | (0.010) | (0.009) | (0.009) | (0.007) |
| *skill1* | –0.470\*\*\* | 0.023 | 0.340\*\*\* | –0.181\*\*\* | –0.129\*\*\* | 0.326\*\*\* |
|  | (0.022) | (0.044) | (0.040) | (0.031) | (0.021) | (0.023) |
| *skill2* | –0.385\*\*\* | –0.016 | 0.166\*\*\* | –0.084\*\*\* | –0.093\*\*\* | 0.140\*\*\* |
|  | (0.014) | (0.025) | (0.024) | (0.017) | (0.013) | (0.013) |
| *skill3* | –0.060\*\*\* | 0.015 | 0.089\*\*\* | –0.026\* | –0.046\*\*\* | 0.111\*\*\* |
|  | (0.012) | (0.023) | (0.018) | (0.014) | (0.013) | (0.013) |
| *unlimited* | 0.119\*\*\* | 0.056\*\*\* | –0.013 | 0.037\*\*\* | 0.583\*\*\* | 0.031\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.010) | (0.010) | (0.009) |
| *part-time* | –0.058\*\*\* | 0.004 | 0.058\*\*\* | –0.073\*\*\* | –0.066\*\*\* | 0.112\*\*\* |
|  | (0.009) | (0.016) | (0.012) | (0.012) | (0.009) | (0.009) |
| *GVC* | –0.008 | 0.215 | –0.084 | –0.017 | –0.116 | 0.058 |
|  | (0.072) | (0.133) | (0.093) | (0.075) | (0.073) | (0.076) |
| *Tech* | 0.077\*\*\* | 0.054\*\*\* | 0.276\*\*\* | –0.017 | 0.016\* | 0.094\*\*\* |
|  | (0.012) | (0.020) | (0.018) | (0.012) | (0.010) | (0.012) |
| *GVC×Tech* | 0.251\*\*\* | –0.024 | 0.258\*\*\* | –0.091\*\* | 0.092\*\* | –0.07 |
|  | (0.050) | (0.075) | (0.062) | (0.043) | (0.041) | (0.051) |
| *N* | 22 524 | 22 350 | 22 523 | 22 478 | 22 521 | 22 524 |

\*, \*\* and \*\*\* indicate statistical significance at the 10, 5 and 1 per cent levels, respectively.

Notes: Country and sector fixed effects included. Robust standard errors in parentheses, clustered at the country-sector level.

Source: Our own calculations based on data from the EWCS and WIOD, Visser (2019) and Felten, Raj and Seamans (2018 and 2019).

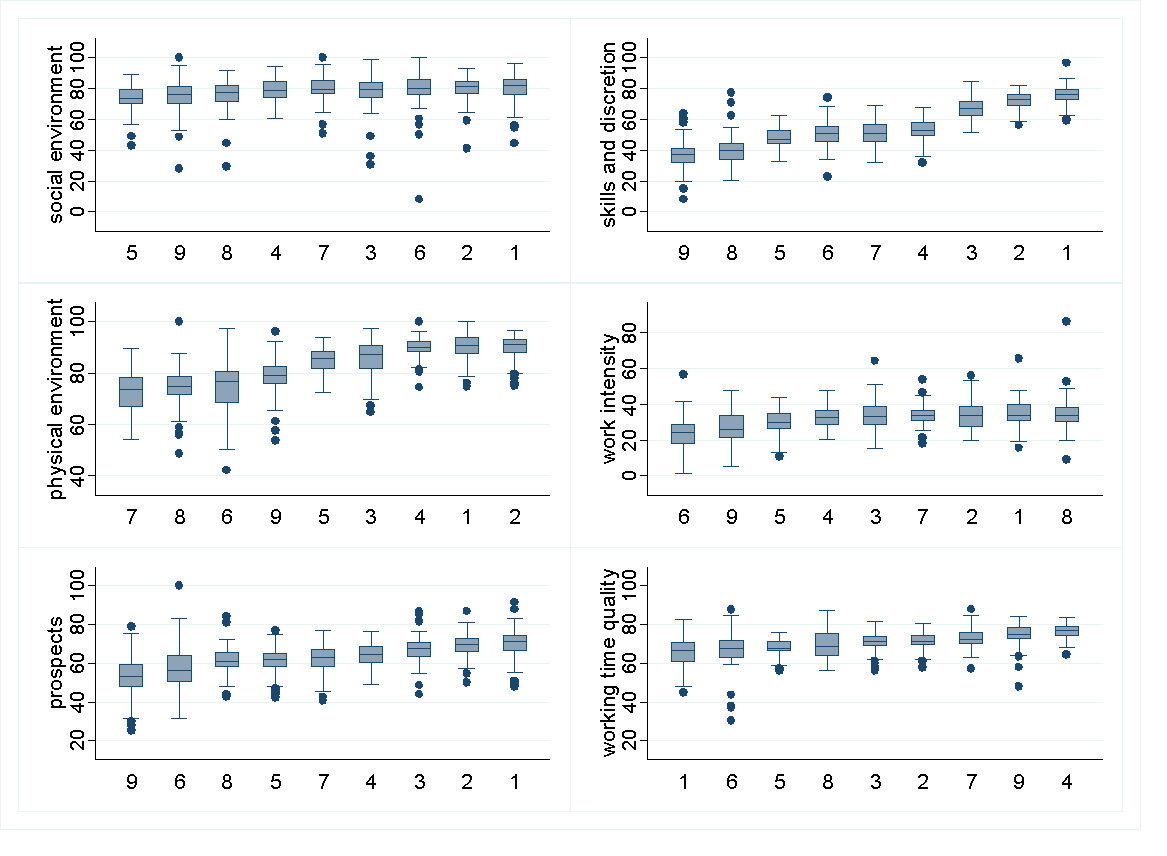
**Figure SA1. Variation of job quality indices across countries**



Notes: High work intensity should be interpreted as poor working conditions. The figures are computed using the sample of more than 9 million workers from 22 European countries with weights based on the grossing-up factor for employees (from the SES). The list of countries is provided in footnote 7 in the main text, while job quality EWCS indices are described in detail in table SA3 in this supplementary online appendix.

Source: Our own calculations based on job quality indices from the 2015 EWCS merged with the 2014 SES indices.

**Figure SA2. Variation of job quality indices across occupations**

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Notes: Workers grouped into one-digit ISCO-08 occupations: 1-Managers, 2-Professionals, 3-Technicians and associate professionals, 4-Clerical support workers, 5-Service and sales workers, 6-Skilled agricultural, forestry and fishery workers, 7-Craft and related trades workers, 8-Plant and machine operators and assemblers, 9-Elementary occupations. High work intensity should be interpreted as poor working conditions. The figures are computed using the sample of more than 9 million workers from 22 European countries with weights based on the grossing-up factor for employees (from the SES).

Source: Our own calculations based on job quality indices from the 2015 EWCS merged with the 2014 SES indices.

**Figure SA3. Distribution of occupations by technology measures**

**Panel A**



**Panel B**



**Panel C**



Notes: 2-digit ISCO 2008 occupations ranked by percentiles (x-axis) of their location in the distributions based on the three technology measures. Y-axis indicates actual values of technology scores. Description of 2-digit ISCO codes are provided in table SA2.

Source: Our own elaboration based on Webb (2020).

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