Appendix B: Supplementary Tables

Table B1: The definition of control variables

|  |  |  |
| --- | --- | --- |
| VARIABLES | Describe/Reason to use | Definition/Calculation |
| male | whether the sample is male | =1 if the sample is male |
| living\_with\_partner | Whether the sample is living with a spouse or partner | =1 if the sample is living with partner |
| child | Whether the sample has child | =1 if the sample at least has one child |
| high\_school | PIAAC datasets just report the samples education by the level of high school | =1 if The sample’s education is high school |
| above\_high\_school | Whether The sample’s education is higher than high school | =1 if The sample’s education is higher than high school |
| less\_than\_high\_school | Whether The sample’s education is lower than high school | =1 if The sample’s education is lower than high school |
| working\_hours\_40less | 40 are considered as general weekly working hours of a standard employment | =1 if The sample’s weekly working hours is less than 40 hours |
| working\_hours\_40\_50 | 50 is 90% quantile of working hours | =1 if The sample’s weekly working hours is between 40-50 hours |
| working\_hours\_50\_60 | 60 is 95% quantile of working hours | =1 if The sample’s weekly working hours is between 50-60 hours |
| working\_hours\_60more | Whether The sample’s weekly working hours is more than 60 | =1 if The sample’s weekly working hours is more than 60 hours |
| age\_25less | Whether the sample’s age is 25 or less | =1 if the sample’s age is less than 25 |
| age\_25\_54 | Whether the sample’s age is between 25 and 54 | =1 if the sample’s age is between 25 and 54 |
| age\_55\_65 | Whether the sample’s age is between 55 and 65 | =1 if the sample’s age is between 25 and 54 |
| income\_less10 | PIAAC reports the sample’s income percentile in the country, but not the absolute income. | =1 if the sample’s income is less than 10 percentile in the country |
| income\_10\_25 | Whether the sample’s income is between 10 and 25 percentile in the country | =1 if the sample’s income is between 10 and 25 percentile in the country |
| income\_25\_50 | Whether the sample’s income is between 25 and 50 percentile in the country | =1 if the sample’s income is between 25 and 50 percentile in the country |
| income\_50\_75 | Whether the sample’s income is between 50 and 75 percentile in the country | =1 if the sample’s income is between 50 and 75 percentile in the country |
| income\_75\_90 | Whether the sample’s income is between 75 and 90 percentile in the country | =1 if the sample’s income is between 75 and 90 percentile in the country |
| income\_90more | Whether the sample’s income is more than 90 percentile in the country | =1 if the sample’s income is more than 90 percentile in the country |
| father\_edu | PIAAC reports father or male guardian highest level of education in 3 levels | 1-3 ordinal level variable |
| mother\_edu | PIAAC reports mother or female guardian highest level of education in 3 levels | 1-3 ordinal level variable |
| numeracy | PIAAC gathered a series of numeracy skills applied at work | Interval level variable, index of use of numeracy skills at work |
| reading | PIAAC gathered a series of reading skills applied at work | Interval level variable, index of use of reading skills at work |
| migrant | Whether the sample is a migrant | =1 if the sample did not born in the country |
| nativespeaker | Whether the sample could speak the language as a native speaker | =1 if the sample could speak the language as a native speaker |
| shareinfo | How often does the sample share work-related information with co-workers | 1-5 interval level variable |
| problemsolv | How often does the sample need to  think for a while about what to do next. | 1-5 interval level variable |
| complex | How often does the sample need to think 30 minutes to find a good solution | 1-5 interval level variable |
| physical | How often does the sample need to work physically for a long period | 1-5 interval level variable |
| finger | How often does the sample need to use skill or accuracy with hands or fingers | 1-5 interval level variable |
| cooperate | How often does the sample need to cooperate or collaborate with co-workers | 1-5 interval level variable |
| overeducated | PIAAC asked the education level that the sample think the current job requiring | =1 if the sample’s education level is higher than the current job requiring |
| undereducated | Whether the sample’s education level is lower than the current job requiring | =1 if the sample’s education level is lower than the current job requiring |
| overskilled | Does the sample feel that having the skills to cope with more demanding duties than current job | =1 if the sample feels over skilled |
| underskilled | Does the sample feel that need further training in order to cope well with current job | =1 if the sample feels under skilled |
| firm\_size\_1\_10 | The numbers of people work for sample’s employer at the place where working | =1 if 1 to 10 people working at the place |
| firm\_size\_11\_50 | Firms with 11 to 50 employees | =1 if 11 to 50 people working at the place |
| firm\_size\_51\_250 | Firms with 51 to 250 employees | =1 if 51 to 250 people working at the place |
| firm\_size\_251\_1000 | Firms with 251 to 1000 employees | =1 if 251 to 1000 people working at the place |
| firm\_size\_1000more | Firms with more than 1000 employees | =1 if more than 1000 people working at the place |
| private\_sector | Whether the individual is employed in the private sector | =1 if the sample does not work in a public ownership organization |
| public\_sector | Whether the individual is employed in the public sector. | =1 if the sample works in a public ownership organization |
| nonprofit\_sector | Whether the individual is employed in the nonprofit sector | =1 if the organization not publicly funded but aim not to generate a profit |
| part\_time | Whether the sample works as a part-time job | =1 if the sample thinks part-time best describes the current situation |
| manager | Whether the individual holds a managerial position. | =1 if the sample manages or supervises other employees |
| GDP\_k | The Gross Domestic Product per capita of the country, divided by 1000 | GDP per head, US $, constant prices, constant PPPs, reference year 2015 |
| CPI | Consumer Price Index | Consumer prices - annual inflation of the country in 2012 |
| internet | Internet access and usage | Percentage of individual using internet during last 3 months |
| unemp\_rate | The percentage of the labor force that is unemployed | Average of monthly unemployment rate in 2012 of the country |
| unemployment\_duration | The average length of time individuals remain unemployed. | Average months of unemployment in the country |
| social\_expenditure | Government spending on social programs | Net total social expenditure, in % GDP |
| laborprot\_SE | the level of labor protection in standard employment. | A synthetic indicator of the strictness on dismissals of regular contract worker |
| laborprot\_NSE | the level of labor protection in non-standard employment. | A synthetic indicator of the strictness on dismissals of temporary worker |
| union\_density | The density of trade union | Percentage of employees |
| developed | Whether the country is considered economically developed | =1 if the country considered as developed |
| Data of country controls are driven from OECD website: https://stats.oecd.org; data of developed countries are driven from The World Bank’s Classification of Countries (Fantom and Serajuddin, 2016) | | |

Table B1 shows the definition of variables. There are 54 control variables in total (including dummy variables), among them, 34 are in individual level, 10 are in organization level, and 10 are in country level.

Table B2: The descriptive statistics of organizational controls

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| VARIABLES | N | mean | std. | min | max |
| firm\_size\_1\_10 | 73,993 | 0.250 | 0.433 | 0 | 1 |
| firm\_size\_11\_50 | 73,993 | 0.315 | 0.465 | 0 | 1 |
| firm\_size\_51\_250 | 73,993 | 0.235 | 0.424 | 0 | 1 |
| firm\_size\_251\_1000 | 73,993 | 0.120 | 0.325 | 0 | 1 |
| firm\_size\_1000more | 73,993 | 0.0787 | 0.269 | 0 | 1 |
| private\_sector | 73,993 | 0.678 | 0.467 | 0 | 1 |
| public\_sector | 73,993 | 0.293 | 0.455 | 0 | 1 |
| nonprofit\_sector | 73,993 | 0.0292 | 0.168 | 0 | 1 |
| part\_time | 73,993 | 0.185 | 0.388 | 0 | 1 |
| manager | 73,993 | 0.306 | 0.461 | 0 | 1 |

Table B2 shows that the sample concentrates firms predominantly with smaller sizes. The majority of samples are working for private sector, and there is a descending order of percentage as firm size increases, indicating the samples have relatively representatives.

Table B3: The descriptive statistics of country controls

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| VARIABLES | N | mean | std. | min | max |
| GDP\_k | 73,993 | 38.86 | 10.16 | 24.12 | 59.80 |
| CPI | 73,993 | 2.469 | 1.203 | 0 | 5.652 |
| internet | 73,993 | 79.97 | 9.693 | 59.00 | 94.53 |
| unemp\_rate | 73,993 | 9.207 | 4.783 | 3.200 | 24.83 |
| unemployment\_duration | 73,993 | 37.73 | 15.09 | 0.303 | 63.75 |
| social\_expenditure | 73,993 | 21.99 | 5.070 | 10.26 | 30.67 |
| laborprot\_SE | 73,993 | 2.093 | 0.632 | 0.293 | 3.288 |
| laborprot\_NSE | 73,993 | 1.748 | 0.787 | 0.292 | 3.188 |
| union\_density | 73,993 | 25.35 | 18.01 | 6 | 69 |
| developed | 73,993 | 0.915 | 0.279 | 0 | 1 |

Table B3 shows that most countries are developed countries. The sample has a variation of GDP per-capita and internet usage, indicating the divergence of economic conditions and digital access, reflecting disparities in development. The situation and regulation of labor market has a wide spread from countries as well, which may affect the ratio of non-standard employment.

Table B4: Non-standard employment and RTI in each group

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group | N | % of sample | NSE Mean | NSE Std | RTI Mean | RTI Std |
| Anglo Saxon Countries | 10884 | 14.7 | 0.332 | 0.471 | 2.601 | 1.015 |
| Middle East EU Countries | 19593 | 30 | 0.0419 | 0.2 | 2.993 | 1.02 |
| South West EU Countries | 24465 | 33.1 | 0.0704 | 0.256 | 2.936 | 1.041 |
| Nordic Countries | 10165 | 13.7 | 0.0308 | 0.173 | 2.458 | 0.879 |
| East Asia Countries | 6327 | 8.55 | 0.162 | 0.368 | 3.044 | 1.071 |
| Average of 24 countries | 3083 | 4.2 | 0.1094 | 0.2205 | 2.8707 | 1.0088 |

Table B4 shows non-standard employment and RTI in each group. Each country has 3083 sample in average, about 63% of the sample are coming from Europe. Anglo Saxon countries has the biggest number of non-standard employment, 33.2%, while Nordic countries has the lowest, 3.08%. RTI in East Asia countries are highest (3.04), in Nordic countries are lowest (2.458), indicating a social context difference.

Table B5: The complete version of the main regression

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) |
| z\_RTI | 1.1444\*\*\* | 1.1243\*\*\* | 1.1333\*\*\* | 1.1240\*\*\* | 1.1364\*\*\* | 1.4354\*\*\* |
|  | (0.019) | (0.020) | (0.024) | (0.025) | (0.026) | (0.098) |
| male | 0.8448\*\*\* | 0.8665\*\*\* | 1.0154 | 1.0167 | 1.0627 | 1.0630 |
|  | (0.023) | (0.024) | (0.036) | (0.040) | (0.042) | (0.042) |
| less\_than\_high\_school | 1.6707\*\*\* | 1.5842\*\*\* | 1.4794\*\*\* | 1.4197\*\*\* | 1.5095\*\*\* | 1.5024\*\*\* |
|  | (0.072) | (0.069) | (0.078) | (0.076) | (0.081) | (0.081) |
| above\_high\_school | 1.0023 | 1.0159 | 0.6827\*\*\* | 0.7624\*\*\* | 0.8622\*\*\* | 0.8656\*\*\* |
|  | (0.032) | (0.033) | (0.029) | (0.034) | (0.039) | (0.039) |
| age\_25less | 1.6251\*\*\* | 1.5520\*\*\* | 1.7231\*\*\* | 1.8086\*\*\* | 1.7913\*\*\* | 1.7863\*\*\* |
|  | (0.067) | (0.065) | (0.088) | (0.094) | (0.094) | (0.094) |
| age\_25\_55 (referee group) | - | - | - | - | - | - |
| - | - | - | - | - | - |
| age\_55\_65 | 1.2294\*\*\* | 1.2482\*\*\* | 1.1968\*\*\* | 1.1761\*\*\* | 1.1035\* | 1.1074\*\* |
|  | (0.045) | (0.047) | (0.058) | (0.058) | (0.056) | (0.056) |
| working\_hours\_40less | 1.2870\*\*\* | 0.9551 | 1.3781\*\*\* | 1.2120\*\*\* | 1.2095\*\*\* | 1.2055\*\*\* |
|  | (0.038) | (0.033) | (0.060) | (0.055) | (0.057) | (0.057) |
| working\_hours\_40\_50 (referee group) | - | - | - | - | - | - |
| - | - | - | - | - | - |
| working\_hours\_50\_60 | 1.7423\*\*\* | 1.6953\*\*\* | 1.3732\*\*\* | 1.2028\*\*\* | 1.1607\*\* | 1.1590\*\* |
|  | (0.078) | (0.076) | (0.083) | (0.074) | (0.074) | (0.074) |
| working\_hours\_60more | 2.6852\*\*\* | 2.5477\*\*\* | 1.9368\*\*\* | 1.6689\*\*\* | 1.6482\*\*\* | 1.6448\*\*\* |
|  | (0.138) | (0.132) | (0.132) | (0.117) | (0.118) | (0.118) |
| living\_with\_partner | 0.7011\*\*\* | 0.7044\*\*\* | 0.8488\*\*\* | 0.8532\*\*\* | 0.8378\*\*\* | 0.8374\*\*\* |
|  | (0.022) | (0.022) | (0.034) | (0.034) | (0.034) | (0.034) |
| income\_less10 | 1.6058\*\*\* | 1.1236\*\*\* | 1.3335\*\*\* | 1.4004\*\*\* | 0.8211\*\*\* | 0.8173\*\*\* |
|  | (0.067) | (0.050) | (0.071) | (0.075) | (0.037) | (0.037) |
| income\_10\_25 | 1.0643 | 0.9105\*\* | 1.1034\*\* | 1.1173\*\* | 1.3983\*\*\* | 1.3911\*\*\* |
|  | (0.041) | (0.036) | (0.052) | (0.053) | (0.076) | (0.076) |
| income\_25\_50 (referee group) | - | - | - | - | - | - |
| - | - | - | - | - | - |
| income\_50\_75 | 0.9519 | 1.0483 | 0.7965\*\*\* | 0.7603\*\*\* | 1.0919\* | 1.0891\* |
|  | (0.036) | (0.040) | (0.040) | (0.039) | (0.052) | (0.052) |
| income\_75\_90 | 0.9637 | 1.1106\*\* | 0.7330\*\*\* | 0.7127\*\*\* | 0.7891\*\*\* | 0.7880\*\*\* |
|  | (0.045) | (0.053) | (0.049) | (0.049) | (0.041) | (0.041) |
| income\_90more | 0.8839\*\* | 1.0085 | 0.8474\*\* | 0.8293\*\* | 0.7201\*\*\* | 0.7180\*\*\* |
|  | (0.049) | (0.057) | (0.067) | (0.067) | (0.052) | (0.052) |
| child | 0.9166\*\*\* | 0.9081\*\*\* | 0.8122\*\*\* | 0.8230\*\*\* | 0.8006\*\*\* | 0.8053\*\*\* |
|  | (0.029) | (0.029) | (0.032) | (0.033) | (0.033) | (0.033) |
| numeracy | 1.0675\*\*\* | 1.0370\*\*\* | 0.9673\* | 0.9700\* | 0.9594\*\* | 0.9586\*\* |
|  | (0.014) | (0.014) | (0.017) | (0.018) | (0.018) | (0.018) |
| reading | 1.0576\*\*\* | 1.0859\*\*\* | 0.9585\* | 0.9745 | 0.9796 | 0.9774 |
|  | (0.018) | (0.019) | (0.021) | (0.022) | (0.023) | (0.023) |
| migrant | 1.1053\* | 1.0682 | 0.8222\*\*\* | 0.8633\*\* | 0.9331 | 0.9293 |
|  | (0.060) | (0.058) | (0.056) | (0.060) | (0.068) | (0.067) |
| nativespeaker | 0.7662\*\*\* | 0.7333\*\*\* | 0.6238\*\*\* | 0.7060\*\*\* | 0.7755\*\*\* | 0.7805\*\*\* |
|  | (0.044) | (0.042) | (0.046) | (0.053) | (0.061) | (0.061) |
| father\_edu | 1.0262 | 1.0335 | 1.1920\*\*\* | 1.1371\*\*\* | 1.0590\*\* | 1.0581\*\* |
|  | (0.022) | (0.022) | (0.033) | (0.032) | (0.030) | (0.030) |
| mother\_edu | 1.2573\*\*\* | 1.2567\*\*\* | 1.1698\*\*\* | 1.1380\*\*\* | 1.0487 | 1.0477 |
|  | (0.027) | (0.028) | (0.034) | (0.033) | (0.032) | (0.032) |
| cooperate | 1.0403\*\*\* | 1.0625\*\*\* | 0.9878 | 0.9820 | 0.9909 | 0.9912 |
|  | (0.010) | (0.011) | (0.012) | (0.013) | (0.013) | (0.013) |
| shareinfo | 0.8560\*\*\* | 0.8685\*\*\* | 0.9353\*\*\* | 0.9420\*\*\* | 0.9376\*\*\* | 0.9374\*\*\* |
|  | (0.010) | (0.010) | (0.013) | (0.014) | (0.014) | (0.014) |
| problemsolv | 1.0146 | 1.0164 | 1.0075 | 1.0134 | 1.0098 | 1.0097 |
|  | (0.012) | (0.012) | (0.014) | (0.014) | (0.015) | (0.015) |
| complex | 1.0412\*\*\* | 1.0538\*\*\* | 0.9997 | 0.9851 | 0.9836 | 0.9838 |
|  | (0.013) | (0.013) | (0.016) | (0.016) | (0.016) | (0.016) |
| physical | 1.0774\*\*\* | 1.0787\*\*\* | 1.0301\*\*\* | 1.0311\*\*\* | 1.0247\*\* | 1.0245\*\* |
|  | (0.009) | (0.009) | (0.011) | (0.011) | (0.012) | (0.012) |
| finger | 1.0590\*\*\* | 1.0600\*\*\* | 0.9945 | 0.9987 | 0.9990 | 0.9978 |
|  | (0.009) | (0.009) | (0.010) | (0.010) | (0.011) | (0.011) |
| overeducated | 1.3392\*\*\* | 1.2648\*\*\* | 1.2790\*\*\* | 1.3847\*\*\* | 1.4493\*\*\* | 1.4406\*\*\* |
|  | (0.044) | (0.043) | (0.054) | (0.060) | (0.064) | (0.063) |
| undereducated | 0.8734\*\*\* | 0.8651\*\*\* | 0.8328\*\*\* | 0.8437\*\*\* | 0.8661\*\* | 0.8699\*\* |
|  | (0.041) | (0.041) | (0.048) | (0.049) | (0.051) | (0.051) |
| overskilled | 1.4983\*\*\* | 1.4849\*\*\* | 0.9814 | 0.9963 | 0.9908 | 0.9901 |
|  | (0.058) | (0.058) | (0.047) | (0.048) | (0.049) | (0.049) |
| underskilled | 0.7297\*\*\* | 0.7275\*\*\* | 1.0889\*\* | 1.1073\*\*\* | 1.1126\*\*\* | 1.1113\*\*\* |
|  | (0.021) | (0.021) | (0.040) | (0.041) | (0.042) | (0.042) |
| manager |  | 0.8318\*\*\* | 0.8147\*\*\* | 0.8055\*\*\* | 0.8447\*\* | 0.8440\*\* |
|  |  | (0.028) | (0.035) | (0.036) | (0.071) | (0.071) |
| firm\_size\_1\_10 |  | 1.6408\*\*\* | 2.0790\*\*\* | 2.0175\*\*\* | 2.0494\*\*\* | 2.0473\*\*\* |
|  |  | (0.061) | (0.099) | (0.100) | (0.103) | (0.103) |
| firm\_size\_11\_50 |  | 1.0888\*\* | 1.2201\*\*\* | 1.2049\*\*\* | 1.2149\*\*\* | 1.2142\*\*\* |
|  |  | (0.041) | (0.059) | (0.060) | (0.062) | (0.061) |
| firm\_size\_50\_250 (referee group) | - | - | - | - | - | - |
| - | - | - | - | - | - |
| firm\_size\_251\_1000 |  | 1.1103\*\* | 0.9362 | 0.9451 | 0.9332 | 0.9324 |
|  |  | (0.055) | (0.062) | (0.064) | (0.066) | (0.066) |
| firm\_size\_1000more |  | 1.2321\*\*\* | 0.9885 | 1.0348 | 1.0071 | 1.0042 |
|  |  | (0.070) | (0.078) | (0.085) | (0.087) | (0.086) |
| public\_sector |  | 0.7280\*\*\* | 0.8379\*\*\* | 0.8258\*\*\* | 0.7961\*\*\* | 0.7964\*\*\* |
|  |  | (0.025) | (0.037) | (0.047) | (0.047) | (0.047) |
| nonprofit\_sector |  | 1.5056\*\*\* | 0.8684 | 0.9066 | 0.8870 | 0.8848 |
|  |  | (0.097) | (0.079) | (0.092) | (0.094) | (0.094) |
| part\_time |  | 2.2212\*\*\* | 1.7813\*\*\* | 1.9485\*\*\* | 2.0855\*\*\* | 2.0835\*\*\* |
|  |  | (0.083) | (0.080) | (0.090) | (0.097) | (0.097) |
| unemployment\_duration |  |  | 0.9378\*\*\* | 0.9407\*\*\* | 0.9532\*\*\* | 0.9533\*\*\* |
|  |  |  | (0.002) | (0.002) | (0.002) | (0.002) |
| GDP\_k |  |  | 1.0984\*\*\* | 1.1090\*\*\* | 1.0941\*\*\* | 1.0936\*\*\* |
|  |  |  | (0.003) | (0.003) | (0.006) | (0.006) |
| internet |  |  | 0.8827\*\*\* | 0.8881\*\*\* | 0.8600\*\*\* | 0.8603\*\*\* |
|  |  |  | (0.003) | (0.003) | (0.003) | (0.003) |
| CPI |  |  | 1.0088 | 1.1035\*\*\* | 1.0752\*\* | 1.0735\*\* |
|  |  |  | (0.024) | (0.028) | (0.031) | (0.031) |
| social\_expenditure |  |  | 1.0566\*\*\* | 1.0520\*\*\* | 1.0718\*\*\* | 1.0717\*\*\* |
|  |  |  | (0.005) | (0.005) | (0.008) | (0.008) |
| laborprot\_SE |  |  | 0.3223\*\*\* | 0.3166\*\*\* | 0.4126\*\*\* | 0.4144\*\*\* |
|  |  |  | (0.014) | (0.014) | (0.025) | (0.025) |
| laborprot\_NSE |  |  | 0.6623\*\*\* | 0.6954\*\*\* | 0.4310\*\*\* | 0.4301\*\*\* |
|  |  |  | (0.022) | (0.024) | (0.021) | (0.021) |
| unemp\_rate |  |  | 1.0747\*\*\* | 1.0671\*\*\* | 1.0610\*\*\* | 1.0611\*\*\* |
|  |  |  | (0.006) | (0.006) | (0.008) | (0.008) |
| union\_density |  |  | 0.9555\*\*\* | 0.9529\*\*\* | 0.8940\*\*\* | 0.8942\*\*\* |
|  |  |  | (0.002) | (0.002) | (0.004) | (0.004) |
| developed |  |  | 2.2415\*\*\* | 2.8380\*\*\* | 4.7466\*\*\* | 4.7354\*\*\* |
|  |  |  | (0.237) | (0.315) | (0.526) | (0.528) |
| Anglo\_Saxon |  |  |  |  | 0.0156\*\*\* | 0.0163\*\*\* |
|  |  |  |  |  | (0.004) | (0.004) |
| Middle\_East\_EU |  |  |  |  | 0.0090\*\*\* | 0.0094\*\*\* |
|  |  |  |  |  | (0.003) | (0.003) |
| East\_Asia |  |  |  |  | 0.0128\*\*\* | 0.0135\*\*\* |
|  |  |  |  |  | (0.003) | (0.004) |
| South\_West\_EU |  |  |  |  | 0.0128\*\*\* | 0.0134\*\*\* |
|  |  |  |  |  | (0.003) | (0.003) |
| Nordic (referee group) | - | - | - | - | - | - |
| - | - | - | - | - | - |
| Anglo\_Saxon\_RTI |  |  |  |  |  | 0.7654\*\*\* |
|  |  |  |  |  |  | (0.057) |
| Middle\_East\_EU\_RTI |  |  |  |  |  | 0.7871\*\*\* |
|  |  |  |  |  |  | (0.061) |
| East\_Asia\_RTI |  |  |  |  |  | 0.7671\*\*\* |
|  |  |  |  |  |  | (0.060) |
| South\_West\_EU\_RTI |  |  |  |  |  | 0.7884\*\*\* |
|  |  |  |  |  |  | (0.057) |
| Constant | 0.0485\*\*\* | 0.0369\*\*\* | 1,598.8942\*\*\* | 821.7802\*\*\* | 1825478.4525\*\*\* | 1740741.1843\*\*\* |
|  | (0.005) | (0.004) | (567.486) | (316.595) | (1287979.406) | (1231838.829) |
| Individual Controls | √ | √ | √ | √ | √ | √ |
| Organizational Controls |  | √ | √ | √ | √ | √ |
| Country Controls |  |  | √ | √ | √ | √ |
| Industry Fixed Effect |  |  |  | √ | √ | √ |
| Observations | 73,993 | 73,993 | 73,993 | 73,993 | 73,993 | 73,993 |
| Pseudo R2 | 0.0643 | 0.0847 | 0.3977 | 0.4082 | 0.4189 | 0.4192 |
| LL | -22735.72 | -22239.47 | -14634.66 | -14380.49 | -14120.41 | -14113.36 |
| AIC | 45537.44 | 44560.93 | 29371.33 | 29038.97 | 28526.81 | 28520.71 |
| seEform in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; the VIF of all independent variables are less than 10. | | | | | | |

Table B5 shows the complete results of main regression. The result of control variables are constant with the existing researches.

Table B6: The results of change RTI calculation

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) |
| z\_robust\_RTI | 1.3155\*\*\* | 1.2609\*\*\* | 1.0720\*\*\* | 1.0682\*\*\* | 1.0756\*\*\* | 1.3252\*\*\* |
|  | (0.015) | (0.018) | (0.019) | (0.019) | (0.020) | (0.083) |
| Anglo\_Saxon |  |  |  |  | 0.0389\*\*\* | 0.0402\*\*\* |
|  |  |  |  |  | (0.010) | (0.010) |
| Middle\_East\_EU |  |  |  |  | 0.0265\*\*\* | 0.0282\*\*\* |
|  |  |  |  |  | (0.008) | (0.009) |
| South\_West\_EU |  |  |  |  | 0.0303\*\*\* | 0.0309\*\*\* |
|  |  |  |  |  | (0.006) | (0.007) |
| East\_Asia |  |  |  |  | 0.0332\*\*\* | 0.0348\*\*\* |
|  |  |  |  |  | (0.009) | (0.009) |
| Nordic (referee group) | - | - | - | - | - | - |
|  | - | - | - | - | - | - |
| Anglo\_Saxon\_z\_r\_RTI |  |  |  |  |  | 0.7875\*\*\* |
|  |  |  |  |  |  | (0.055) |
| Middle\_East\_EU\_z\_r\_RTI |  |  |  |  |  | 0.7410\*\*\* |
|  |  |  |  |  |  | (0.053) |
| South\_West\_EU\_z\_r\_RTI |  |  |  |  |  | 0.8483\*\* |
|  |  |  |  |  |  | (0.057) |
| East\_Asia\_z\_r\_RTI |  |  |  |  |  | 0.7893\*\*\* |
|  |  |  |  |  |  | (0.058) |
| Constant | 0.1108\*\*\* | 0.0339\*\*\* | 4,989.8614\*\*\* | 4,117.0422\*\*\* | 2661060.3509\*\*\* | 2414374.7587\*\*\* |
|  | (0.001) | (0.004) | (1,637.657) | (1,438.091) | (1895025.852) | (1725498.052) |
| Individual Controls |  | √ | √ | √ | √ | √ |
| Organizational Controls |  | √ | √ | √ | √ | √ |
| Country Controls |  |  | √ | √ | √ | √ |
| Industry Fixed Effect |  |  |  | √ | √ | √ |
| Observations | 73,993 | 73,993 | 73,993 | 73,993 | 73,993 | 73,993 |
| Pseudo R2 | 0.0115 | 0.0893 | 0.3961 | 0.4059 | 0.4138 | 0.4143 |
| LL | -24019.27 | -22129.44 | -14674.73 | -14435.86 | -14243.83 | -14232.71 |
| AIC | 48042.54 | 44340.88 | 29449.46 | 29147.72 | 28771.65 | 28757.41 |
| |  | | --- | | seEform in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | | | | | | | |

Table B6 shows the complete results of changing the calculation of RTI. The results are changed very little from the main regression, which are still constant with Hypothesis 1, 2 and 3.

Table B7: The results of binary probit regression

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) |
| z\_RTI | 1.1274\*\*\* | 1.0641\*\*\* | 1.0685\*\*\* | 1.0614\*\*\* | 1.0702\*\*\* | 1.1626\*\*\* |
|  | (0.007) | (0.010) | (0.012) | (0.012) | (0.012) | (0.037) |
| Anglo\_Saxon |  |  |  |  | 0.1775\*\*\* | 0.1797\*\*\* |
|  |  |  |  |  | (0.020) | (0.020) |
| Middle\_East\_EU |  |  |  |  | 0.1438\*\*\* | 0.1469\*\*\* |
|  |  |  |  |  | (0.019) | (0.020) |
| East\_Asia |  |  |  |  | 0.1666\*\*\* | 0.1688\*\*\* |
|  |  |  |  |  | (0.020) | (0.020) |
| South\_West\_EU |  |  |  |  | 0.1480\*\*\* | 0.1493\*\*\* |
|  |  |  |  |  | (0.014) | (0.014) |
| Nordic (referee group) | - | - | - | - | - | - |
|  | - | - | - | - | - | - |
| Anglo\_Saxon\_zRTI |  |  |  |  |  | 0.9060\*\*\* |
|  |  |  |  |  |  | (0.033) |
| Middle\_East\_EU\_zRTI |  |  |  |  |  | 0.8940\*\*\* |
|  |  |  |  |  |  | (0.033) |
| East\_Asia\_zRTI |  |  |  |  |  | 0.9238\*\* |
|  |  |  |  |  |  | (0.035) |
| South\_West\_EU\_zRTI |  |  |  |  |  | 0.9262\*\* |
|  |  |  |  |  |  | (0.031) |
| Constant | 0.2782\*\*\* | 0.1594\*\*\* | 31.1563\*\*\* | 23.0463\*\*\* | 518.9169\*\*\* | 503.7220\*\*\* |
|  | (0.002) | (0.010) | (5.263) | (4.271) | (170.035) | (165.275) |
| Individual Controls |  | √ | √ | √ | √ | √ |
| Organizational Controls |  | √ | √ | √ | √ | √ |
| Country Controls |  |  | √ | √ | √ | √ |
| Industry Fixed Effect |  |  |  | √ | √ | √ |
| Observations | 73,993 | 73,993 | 73,993 | 73,993 | 73,993 | 73,993 |
| Pseudo R2 | 0.0076 | 0.0847 | 0.3884 | 0.3997 | 0.4115 | 0.4118 |
| LL | -24113.71 | -22241.28 | -14861.9 | -14586.69 | -14298.64 | -14293.39 |
| AIC | 48231.43 | 44564.55 | 29825.79 | 29451.39 | 28883.28 | 28880.79 |
| seEform in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | | | | | | |

Table B7 shows the results of binary probit regression model. The results are still constant with Hypothesis 1, 2 and 3.

Table B8: The results of liner probability model

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) |
| z\_RTI | 0.0219\*\*\* | 0.0094\*\*\* | 0.0042\*\*\* | 0.0027\*\* | 0.0049\*\*\* | -0.0040 |
|  | (0.001) | (0.002) | (0.001) | (0.001) | (0.001) | (0.003) |
| Anglo\_Saxon |  |  |  |  | -0.1001\*\*\* | -0.0915\*\*\* |
|  |  |  |  |  | (0.009) | (0.009) |
| Middle\_East\_EU |  |  |  |  | -0.0471\*\*\* | -0.0388\*\*\* |
|  |  |  |  |  | (0.012) | (0.012) |
| East\_Asia |  |  |  |  | -0.0820\*\*\* | -0.0792\*\*\* |
|  |  |  |  |  | (0.011) | (0.011) |
| South\_West\_EU |  |  |  |  | -0.1891\*\*\* | -0.1843\*\*\* |
|  |  |  |  |  | (0.007) | (0.007) |
| Nordic (referee group) | - | - | - | - | - | - |
|  | - | - | - | - | - | - |
| Anglo\_Saxon\_zRTI |  |  |  |  |  | 0.0228\*\*\* |
|  |  |  |  |  |  | (0.004) |
| Middle\_East\_EU\_zRTI |  |  |  |  |  | -0.0065\* |
|  |  |  |  |  |  | (0.003) |
| East\_Asia\_zRTI |  |  |  |  |  | 0.0320\*\*\* |
|  |  |  |  |  |  | (0.004) |
| South\_West\_EU\_zRTI |  |  |  |  |  | 0.0129\*\*\* |
|  |  |  |  |  |  | (0.003) |
| Constant | 0.1020\*\*\* | 0.0344\*\*\* | 1.1639\*\*\* | 1.1606\*\*\* | 1.1640\*\*\* | 1.1443\*\*\* |
|  | (0.001) | (0.010) | (0.018) | (0.020) | (0.035) | (0.035) |
| Individual Controls |  | √ | √ | √ | √ | √ |
| Organizational Controls |  | √ | √ | √ | √ | √ |
| Country Controls |  |  | √ | √ | √ | √ |
| Industry Fixed Effect |  |  |  | √ | √ | √ |
| Observations | 73,993 | 73,993 | 73,993 | 73,993 | 73,993 | 73,993 |
| R-squared | 0.005 | 0.060 | 0.330 | 0.340 | 0.357 | 0.358 |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | | | | | | |

Table B8 shows the results of liner probability regression model. In column 5, for every standard deviation increase of RTI, the probability of non-standard employment increases 0.49%. In column 5, compare to Nordic countries, the probability of non-standard employment was 10.01% lower in Anglo Saxon countries; 4.71% lower in Middle East EU countries; 8.2% lower in East Asia countries; 18.91% lower in South West EU countries. In column 6, the Nordic countries has no slope effect of the impact of RTI on non-standard employment, but other social contexts have. In Anglo Saxon, East Asia, and South West EU countries, the heterogeneous effects are positive (compare to 0.49%), in Middle East EU countries are negative. The results are still constant with Hypothesis 1, 2 and 3.