**Appendix**

**1. Supplementary Information on Methods**

**1.1 Details on individual-level data**

The individual-level data for this study were extracted from the China Labour-force Dynamics Survey (CLDS), a nationally representative multidisciplinary household survey conducted by Sun Yat-sen University. This survey adopted a multi-stage, multi-stratified, probability proportionate to size (PPS) sampling method. There were three sampling stages. The first stage was a systematic sample of county-level units (the Primary Sampling Unit; PSU hereafter) from the six provincial sampling frames, which were defined according to the geographic definitions of the east, central and west areas and the population size. The second stage was a sample of the urban and rural communities (the Secondary Sampling Unit, SSU hereafter). The urban communities within the sampled county-level units were ranked by their economic development and the scale of non-native residents. SSUs were selected by PPS sampling according to the scale of the labour force. In the final stage, the households (Tertiary Sampling Units; TSU hereafter) were extracted from their communities. The sampling frame of this stage was established by the mapping address method. The TSUs were selected by the circular systematic sampling method from a random starting point. Finally, the individuals aged 15 to 64 in the sampled households were included in the survey sample. CLDS 2012 collected data from 16,253 individuals from 10,612 families in 117 city-level units.

**2.2 Details on the measure of informal sector employment**

In this paper, the labour force of the informal sector in urban China includes two nonexclusive groups. The first group is defined by the ownership type of enterprises. The urban informal sector includes registered private enterprises and individual businesses. The second group is defined by the type of labour contract and employment status. Individuals without a written employment contract or working for a non-full time job are categorized under informal employment. Self-employed are also informal sector employment. The measure of the variable of *Informal Sector Employment* are based on four questions in CLDS 2012 for the above two nonexclusive groups.

* **Question I3a.12 in CLDS2012:** Which type of work unit does your most recent job (or current job) belong to? Options include: (Communist) Party, military, and government administration; public service units; state-owned enterprises; collectively owned enterprises; foreign-owned companies; joint ventures; private enterprises; individual businesses; engaging in agricultural production, engaging in side-line production (e.g., fruit farming and aquatic production, etc.); and others.

Individuals *working in private enterprises and individual businesses* (*minying, siying, geti gongshangye*) are categorized as informal sector employment; the category of formal sector employment include individuals working in (Communist) Party, military, and government administration; public service units; state-owned enterprises, collectively owned enterprises, foreign-owned companies, and joint ventures. Different from the categories defined in statistical yearbooks, limited liability companies; shareholding corporations are not included as options in CLDS2012.

* **Question I3a.14 in CLDS2012:** What isyour specific situation of employment at present? Options include: Employee; Employer (employs 1 person or more); Self-employed non-manual worker; Self-employed manual worker.

*Employers and self-employed workers* (both non-manual and manual) are categorized as informal sector employment.

* **Question I3a1.5 in CLDS2012:** Did you sign a written contract for your current job? Options include: Yes; and No.

Individuals *without a written contract* is categorized as informal sector employment.

* **Question I3a.10 in CLDS2012:** Was (Is) your most recent job (or current job) a full-time job? Options include: Yes; and No.

Individuals *without a full-time job* is categorized as informal sector employment.

**2. Supplementary Figure and Tables**

Figure A1 Quantiles of the number of employees hired by employers in the urban informal sector



Source: CLDS2012.

Note: Sampling weights from CLDS 2012 are applied. More than 70 percent of the employers in the sample reported as self-employed, and thus did not have employees. Most employees were small business owners and only three employers hired more than 50 employees.

Table A1 Descriptive statistics for the individual variables used in the analysis

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Formal and informal sector workers (*N*=3,160) |  | Informal sector workers (*N*=2,067) |
| Mean | SD | Min | Max |  | Mean | SD | Min | Max |
| ***Enrolment in Different Programmes*** |  |  |  |  |  |  |  |
| Basic pension scheme | 0.61 | 0.49 | 0 | 1 | 0.47 | 0.50 | 0 | 1 |
| Social health insurance | 0.44 | 0.50 | 0 | 1 | 0.28 | 0.45 | 0 | 1 |
| Other social insurance | 0.70 | 0.46 | 0 | 1 | 0.58 | 0.49 | 0 | 1 |
| Private pension scheme | 0.07 | 0.26 | 0 | 1 | 0.07 | 0.26 | 0 | 1 |
| Private health insurance | 0.11 | 0.32 | 0 | 1 | 0.11 | 0.31 | 0 | 1 |
| ***Individual-level Characteristics*** |  |  |  |  |  |  |  |  |
| Informal sector (yes =1) | 0.68 | 0.47 | 0 | 1 | ― | ― | ― | ― |
| Urban *hukou* (yes = 1)  | 0.68 | 0.47 | 0 | 1 | 0.59 | 0.49 | 0 | 1 |
| Local *hukou* (yes =1) | 0.79 | 0.41 | 0 | 1 | 0.74 | 0.44 | 0 | 1 |
| Income | 27299.63 | 29323.38 | 0 | 450,000 | 22828.65 | 26902.76 | 0 | 400,000 |
| Education (years of schooling) | 11.41 | 3.32 | 0 | 22 | 10.82 | 3.27 | 0 | 22 |
| Age | 37.02 | 9.86 | 16 | 64 | 36.66 | 10.00 | 16 | 64 |
| Gender (female=1) | 0.40 | 0.49 | 0 | 1 | 0.42 | 0.49 | 0 | 1 |
| Employer (yes = 1) | ― | ― | ― | ― | 0.28 | 0.45 | 0 | 1 |
| Formal sector experience (yes = 1) | ― | ― | ― | ― | 0.38 | 0.48 | 0 | 1 |

Note: Sampling weights from CLDS 2012 are applied. Income was further transformed by adding 0.001 and taking the logarithm before analysis. ‘Other social insurances’ include all work injury insurance, maternity insurance and unemployment insurance programmes.

Table A2 Descriptive statistics for formal and informal sector employment

|  |  |  |
| --- | --- | --- |
| **Types of enterprises**[note2] | **Employment status**[note1] | **Total** |
| Formal employment | Informal employment |
| Formal sector enterprises | 1,093(34.6%) | *432*(13.7%) | 1,525(48.3%) |
| Non-formal enterprises | *555*(17.6%) | *1,080*(34.2%) | 1,635(51.7%) |
| **Informal sector workers** [note3] | ***2,067***(65.4%) | 3,160(100%) |

Note: Sampling weights from CLDS 2012 are applied.

1. This study defines formal and informal employment in terms of individuals’ employment status. Informal employment refers to people working without a written contract, flexibly employed, or self-employed, while others are defined as formal employment.

2. Types of enterprises include formal sector enterprises and non-formal sector enterprises. Formal sector enterprises include individuals working in (Communist) Party, military, and government administration; public service units; state-owned enterprises, collectively owned enterprises, foreign-owned companies, and joint ventures, while others refer to non-formal sector enterprises, such as private enterprises and individual businesses.

3. Informal sector workers refer to people working in non-formal enterprises or working in formal enterprises under informal employment.

Table A3 Descriptive statistics for the city-level variables used in the analysis (in RMB thousands) (*N* = 57)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mean | SD | Min | Max |
| GDP per capita | 55.44 | 28.88 | 16.28 | 123.25 |
| Fiscal revenue | 5.38 | 3.98 | 0.50 | 16.02 |
| Social security and employment expenditure | 0.82 | 0.44 | 0.21 | 2.05 |
| Health expenditure | 0.50 | 0.18 | 0.16 | 1.24 |

Note: The macro-level units of the sample were 53 city-level divisions and 4 municipalities.