Appendix

A Jobs of the World Project

The Jobs of the World Project is a publicly available resource built to enable researchers to analyse comparable labor market outcomes across countries and time using micro data. At the core of the project is the collation and harmonisation of all available Censuses (IPUMS) and Demographic and Health Surveys (DHS) for low and middle income countries. The two sources combined provides coverage of countries representing about 81 percent of the world’s population, and more than 90 percent of the population in low- and middle-income countries. A key innovation is the construction of comparable wealth measures that allow researchers to analyse labor market outcomes across wealth classes. The project has three outputs:

1. codes that allow researchers to implement the harmonisation and produce customised data sets from publicly available IPUMS International Censuses and Demographics and Health Surveys.

2. the Jobs of the World Data (JWD). The database focuses on a wide range of labor market characteristics including, but not limited to: labor force participation, type of employment (e.g., waged or self-employment), sector of employment (e.g., agriculture, manufacturing, or service), skill level (e.g., managers and professionals, white collar, or blue collar)

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*Bandiera: London School of Economics; O.Bandiera@lse.ac.uk. Elsayed: IZA (Institute of Labor Economics); elsayed@iza.org. Smurra: University College London; a.smurra.11@ucl.ac.uk. Zipfel: Stockholm School of Economics; Celine.Zipfel@hhs.se. We thank Gabriel Leite Mariane and Caterina Soto Vieira for their exceptional contribution in assembling the data, and Anders Jensen and Tommaso Sonno for sharing their data. We thank Heidi Williams, Nina Pavcnik, Erik Hurst and Timothy Taylor, for comments and suggestions that substantially improved this paper. The data building and harmonization have been funded by the joint IZA/FCDO Gender, Growth, and Labour Markets in Low Income Countries Programme (G2LM|LIC), we thank Hilmar Schneider, Marco Caliendo, and Benedetta Musillo for supporting this endeavour.
3. web platform to build downloadable maps and charts based on JWD.

More information on each of these elements and downloadable resources are available on the JWP website.¹

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DHS Program

The individual Demographic and Health Surveys (DHS) used in this paper correspond to the following citations:

¹https://dx.doi.org/10.15185/JWP
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Table A1. Samples and Sources of Data

| Country          | Source | Year |
|------------------|--------|------|
| Albania          |        |      |
| Argentina        |        |      |
| Armenia          |        |      |
| Azerbaijan       |        |      |
| Belarus          |        |      |
| Benin            |        |      |
| Bolivia          |        |      |
| Botswana         |        |      |
| Brazil           |        |      |
| Burkina Faso     |        |      |
| Cambodia         |        |      |
| Cameroon         |        |      |
| Chile            |        |      |
| Colombia         |        |      |
| Congo            |        |      |
| Costa Rica       |        |      |
| Dominican Republic|      |      |
| Ecuador          |        |      |
| Egypt            |        |      |
| El Salvador      |        |      |
| Eswatini         |        |      |
| Fiji             |        |      |
| Ghana            |        |      |
| Guatemala        |        |      |
| Guinea           |        |      |
| Guyane           |        |      |
| Haiti            |        |      |
| Honduras         |        |      |
| Indonesia        |        |      |
| Iran             |        |      |
| Jamaica          |        |      |
| Jordan           |        |      |
| Kenya            |        |      |
| Kyrgyzstan       |        |      |
| Laos             |        |      |
| Lesotho          |        |      |
| Liberia          |        |      |
| Madagascar       |        |      |
| Malawi           |        |      |
| Malaysia         |        |      |
| Mali             |        |      |
| Mauritania       |        |      |
| Mexico           |        |      |
| Mongolia         |        |      |
| Morocco          |        |      |
| Namibia          |        |      |
| Nepal            |        |      |
| Nicaragua        |        |      |
| Niger            |        |      |
| Paraguay         |        |      |
| Peru             |        |      |
| Romania          |        |      |
| Rwanda           |        |      |
| Saint Lucia      |        |      |
| Sao Tome and Principe | |      |
| Senegal          |        |      |
| Sierra Leone     |        |      |
| Sudan            |        |      |
| Suriname         |        |      |
| Tanzania         |        |      |
| Togo             |        |      |
| Trinidad and Tobago |    |      |
| Turkey           |        |      |
| Uganda           |        |      |
| Ukraine          |        |      |
| Uruguay          |        |      |
| Vietnam          |        |      |
| Zambia           |        |      |

Source:
- DHS
- IPUMS
C Additional Figures

Figure A.1

Source: UN World Population Prospects (2019).
Note: Regional shares of the world’s total 15-24-year-old population, constructed from population estimates and projections from the UN World Population Prospects, 2019 (https://population.un.org/wpp/). Regions correspond to the geographical units coded in the source data. The figure refers to the cohort aged 15-24 as population counts and projections are provided for 5-year bands. In the remainder of the paper, where we examine aggregates produced from microdata, we will focus on the 18-24 age group.
Figure A.2

Occupational structure of the 18-24 year old population

| Employment status | Africa, N=28 | Other, N=40 |
|-------------------|-------------|-------------|
| Paid work         | 31.0        | 40.0        |
| Unpaid work       | 15.6        | 6.0         |
| Not working       | 53.5        | 54.0        |

| Employment categories | Africa, N=28 | Other, N=40 |
|-----------------------|-------------|-------------|
| Salaried              | 5.1         | 5.8         |
| Agriculture           | 25.9        | 69.9        |
| Manufacturing & services | 41.0     | 20.2        |
| Self-employed         | 27.9        | 14.1        |

Source: Demographic and Health Surveys and IPUMS International, harmonized via the Jobs of the World Project.

Note: Regional aggregates for the 18-24-year-old population in 68 developing countries (28 countries from Africa and 40 countries from the rest of the world) constructed from the latest sample available for each country in the Jobs of the World Database. Samples are selected if they contain the following information for both men and women: whether the individual is engaged in any form of economic activity at the time of the survey or census, type of employer (self/family/someone else), paid/unpaid work, and sector of occupation. The left panel plots the relative shares of three ‘extensive margin’ categories: fraction of individuals aged 18-24 (i) working for pay, (ii) in unpaid work and (iii) not working. The right panel plots the relative shares of four employment categories (defined according to sector and type of work), restricting the sample to working individuals (paid and unpaid). This figure is the version of Figure 2 in the paper when aggregates are not weighted by country population size.
Figure A.3

Employment categories, by gender

|       | Paid work | Unpaid work | Not working |
|-------|-----------|-------------|-------------|
| **Men** |           |             |             |
| Africa, N=28 | 38.3 | 18.5 | 42.2 |
| Other, N=40    | 51.9 | 7.1 | 40.6 |
| **Women** |           |             |             |
| Africa, N=28   | 36.4 | 12.8 | 50.7 |
| Other, N=40    | 51.3 | 6.9 | 41.8 |

**Source:** Demographic and Health Surveys and IPUMS International, harmonized via the Jobs of the World Project.

**Note:** Regional aggregates for the 18-24-year-old population in 68 developing countries (28 countries from Africa and 40 countries from the rest of the world) constructed from the latest sample available for each country in the Jobs of the World Database. Samples are selected if they contain the following information for both men and women: whether the individual is engaged in any form of economic activity at the time of the survey or census, type of employer (self/family/someone else), paid/unpaid work, and sector of occupation. The figure plots the relative shares of three ‘extensive margin’ categories: fraction of individuals aged 18-24 (i) working for pay, (ii) in unpaid work and (iii) not working, split by gender.
Figure A.4

Sectoral employment shares of 18-24 year old population

| Region   | Agriculture | Manufacturing | Services |
|----------|-------------|---------------|----------|
| Africa, N=20 | 51.3        | 16.9          | 31.8     |
| Other, N=36   | 25.7        | 25.6          | 48.7     |

Source: Demographic and Health Surveys and IPUMS International, harmonized via the Jobs of the World Project.

Note: Regional aggregates for the 18-24-year-old population in 56 developing countries (20 countries from Africa and 36 countries from the rest of the world) constructed from the latest sample available for each country in the Jobs of the World Database. Samples are selected if they contain the following information for both men and women: whether the individual is engaged in any form of economic activity at the time of the survey or census, type of employer (self/family/someone else), paid/unpaid work, and disaggregated sector of occupation. The latter variable is available only for a subset of the countries in the core sample.
Figure A.5

Source: Demographic and Health Surveys and IPUMS International, harmonized via the Jobs of the World Project.

Note: Regional aggregates for the 18-24-year-old population in 63 developing countries (28 countries from Africa and 35 countries from the rest of the world) constructed from the latest sample available for each country in the Jobs of the World Database. Samples are selected if they contain the following information for both men and women: whether the individual is engaged in any form of economic activity at the time of the survey or census, type of employer (self/family/someone else), paid/unpaid work, and type of occupation. The figure reports the relative share of the work force engaged in each of three types of occupations: (i) high-skill: professional, managerial and technical occupations; (ii) white collar: clerical, sales and service sector occupations; and (iii) blue collar: manual and unskilled jobs in agriculture and industry, and domestic services.