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Discussion of: "Social Protection for Independent Workers in the Digital Age" by Tito Boeri, Giulia Giupponi, Alan B. Krueger, and Stephen J. Machin

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I. Summary

The Labor Market of Independent (GIG-Economy) Workers: Motivation & Aims

- **Motivation**
  - Increasing supply of independent work internationally, especially in relation to the "GIG economy" (e.g., Abraham et al. (2017), Farrell and Greig (2016)).

- **Aims**

(1) To gauge a systematic picture of current independent work (esp. GIG).

- Size.
- Workers' characteristics.
- Working arrangements.
- Preferences, constraints, risks.

(2) To predict and design the future of independent work (esp. GIG).

- Size.
- Policies (esp. social protection).
- Macroeconomic implications (esp. wages and growth).

The Labor Market of (GIG-Economy) Independent Workers: A Survey Approach

- **Three Online Surveys**
  - Country (Institute): Italy (fRDB); UK (LSE-CEP); US (Princeton SRC).
  - Target: Working-age individuals (IT: 18-64; UK: 18-65).
  - Mode (Platform): Web (IT: Demetra; US: Qualtrics).
  - Time: 2017/2018 (IT: May 2018; UK: Feb-Mar 2018; US: April 2017).
  - Sample Size: 10-20K (IT: 15,000; UK: 20,000; US: 10,000).
  - Focus: Self-employed ("SE"), especially GIG-economy workers ("GIG").
  - Domains: Demographics; Job characteristics; Preferences for flexibility; Need for social protection.
    - IT: WTP for social insurance; Literacy of social protection system.
    - UK: SE, with/out employees; Zero hours contracts.
    - US: Wording experiment on SE (and GIG) status question.

The Labor Market of (GIG-Economy) Independent Workers: Preliminary Evidence

▶ **Summary of Preliminary Evidence across Countries**

(1) Size and Trends

- SE as a % of employed varies across countries: highest in Italy (25-30%) and lower in the UK and US (12-17%).
- Time pattern varies across countries: decreasing in Italy and increasing in the UK and US.
- In the US, survey and tax records measures reveal estimates are sensitive to measurement source (Abraham et al., 2017).
- Though PSES experiment suggests limited or no sensitivity to question wording.

(2) Age

- SE workers youngest in Italy (median = 40) and older in the UK (median = 45) and US (mean = 46.5).
- GIG workers substantially younger than SE ones in the UK (median = 30) and somewhat younger in Italy (median = 37).
- In the US, SE (and GIG) more concentrated in the 55-75 range.

The Labor Market of (GIG-Economy) Independent Workers: Preliminary Evidence (Cont.)

- **Summary of Preliminary Evidence across Countries** (Cont.)

(3) Education

- Higher % of High School and Bachelor grads among GIG than SE in Italy.
- Higher % of Master and PhD grads among GIG than SE in the UK.

(4) Jobs and Hours

- GIG is often one of multiple jobs: 2nd job for >60% of GIG in Italy. In the US, 15-20% of SE hold multiple jobs.
- Weekly hours for GIG concentrated well below 35 (in 0-15h range), with contained spikes at 20, 30, 40.
- Hours' distribution for SE more spread out, with usual large spikes at 40, etc.

The Labor Market of (GIG-Economy) Independent Workers: Preliminary Evidence (Cont.)

- **Summary of Preliminary Evidence across Countries** (Cont.)

(5) Preferences and Constraints

- SE, and esp. GIG, would like to work more hours.
- Perceived constraints come from lack of work or already having other jobs.
- In the UK and US, main reasons for SE and GIG work are dimensions of flexibility.
- In Italy, main reasons for GIG are to complement personal/HH income and pay for incidental expenses.

(6) Demand for Social Protection

- In Italy and UK, retirement savings ranked most often first by both SE and GIG, followed by unemployment insurance.
- In the US, health insurance looms large.

The Labor Market of (GIG-Economy) Independent Workers: Policy and Macro Issues

(1) Pro's and Con's of Policy Proposals

1. Definition of unemployment
2. Shared security account
3. Dependent employment status
4. Social security platforms

(2) Wage Setting

1. Low wages not coping with productivity growth.
   - Lower wages for higher work flexibility? (Esp. in second and/or bridge jobs.)
   - Evidence for wealthy sample in the US by Ameriks et al. (2017).

2. Minimum wage and zero hours contracts (ZHC).
   - Higher wages may lead to lower service quality?
   - Evidence on social care sector in the UK by Datta et al. (2018).

Taking Stock and Moving Forward

(1) In Sum

- Important.
- Interesting.
- Informative.

(2) Some Thoughts on What's Next

(i) Measuring and characterizing independent work.
(ii) Predicting independent work
(iii) Analyzing preferences for independent work.
(iv) Predicting and investigating the effects of policies on independent work (esp. social protection).

II. Some Comments

1. Measuring and characterizing independent work
2. Predicting independent work
3. Understanding preferences for independent work
4. Predicting and understanding the effects of policies on independent work

1A. Measuring Independent Work: Some Challenges

- Surveys. Survey questions can be a flexible and targeted way to measure economic variables such as independent work status and type, but might produce inaccurate or biased aggregate estimates for various reasons.
  - Unit or item non-response; response inaccuracy or bias; ...
  - Concept/question ambiguity; selection related to survey mode, sampling frame, or process; ...

- Administrative records. These are not necessarily error-free or better capable than survey data of measuring the concept of interest (see Kane et al. (1999) for an example and Bound et al. (2001) for discussion).
  - Records may not apply to/be available for all units or groups.
  - Records may be missing or inaccurate due to individuals' behavior (e.g., tax filing, income under-reporting).

- Cross-country comparisons. Comparability raises extra challenges.
  - Comparable questions, wording, mode, sampling frame, and other design features are necessary but not sufficient.
  - On the other hand, specific design variations may be needed to accommodate institutional or other differences.

1A. Measuring Independent Work: Some Thoughts

- Great care in question design and wording to elicit independent work status and type. (The PSES even included a wording experiment.)

- However, potential concerns on selection related to mode and frame.
  - Respondents to web-based studies are web and computer literate. Thus, likely higher educ and SES than the general population.
  - Panelists in online platforms and web studies, (from MTurk to Qualtrics to RAND's ALP or USC's UAS), are effectively GIG workers (or likely have similar characteristics).

- If goal is to obtain accurate estimates of size and types of independent work, may consider combining survey and administrative records. (See Abowd and Stinson (2013) and Abraham et al. (2017) for relevant applications; Chen et al. (2005), Hu and Ridder (2010), Molinari (2008), Schennach (2004) for econometric methods.)

- If comparability across countries is important, may need greater harmonization of questions, length, time of fielding, sampling frame, etc.

1B. Characterizing and Tracking Independent Work

- Demographic and Socio-Economic Information
  - Demographic and socio-economic info are essential for a rich characterization of (types of) independent workers vs. others.
    - E.g., what do we know about country of birth or family structure of SE and GIG?
  - Specific socio-demographics may be especially important in relation to the institutional environment.
    - E.g., marital status, employment status of spouse, and the possibility of health insurance coverage through one's spouse are key social-protection variables in the US context.
  - "Demographic" or "Household" modules of existing web panels are useful templates (e.g., RAND's ALP, USC's UAS, NYFed's SCA).

- Tracking Independent Work over Time
  - Could incorporate questions eliciting GIG status in existing longitudinal (or rotating panel) studies in multiple countries.
  - Or, more ambitiously, could set up a new multi-country panel study on the topic.

2. Predicting Independent Work: Eliciting Subjective *Unconditional* Probabilities

- Imagine asking (adapted from PSES): *"On a scale from 0 to 100, what do you think the chances are that you will be working or self-employed as an independent contractor, an independent consultant, or freelance worker one year from now?"*
- Could add intro to 0-100 PC scale (as in the HRS): *"Next we would like to ask your opinion about how likely you think various events might be. When I ask a question I'd like for you to give me a number from 0 to 100, where "0" means that you think there is absolutely no chance, and "100" means that you think the event is absolutely sure to happen. For example, [...]"*
- Could add intro on SE/GIG (as in the PSES): *"Many people work in self-employment, on either a par-time or full-time basis, doing things such as working on construction jobs, selling goods or services in their businesses, or working through a digital platform or intermediary, such as Uber, Upwork or Avon."*
- Could change horizon, etc.

2. Predicting Independent Work: Using Elicited Subjective *Unconditional* Probabilities

- Predicting Independent Work: The average of responses across respondents gives a point estimate of the fraction of individuals in independent work 1 year ahead.
- Juster (1966) and Manski (1990) provide empirical evidence and theoretical arguments of the greater informativeness of survey probabilities for binary events relative to "yes/no" intention questions to forecast aggregate demand/behavior.
- Subjective unconditional probabilities of working past specified ages collected in the Health and Retirement Study (HRS) have proved to be very predictive of actual labor force participation (see Hurd (2009)).
- Manski (2004) gives a historical account and discusses measurement properties, including greater comparability of numerical probabilities across questions, across respondents, and with realized event frequencies.
- See also reviews by Attanasio (2009), van der Klaauw (2012), Armantier et al. (2013), Manski (2017), and Giustinelli and Manski (2018).

3. Understanding Preferences for Independent Work: Eliciting Subjective *Conditional* Probabilities

(A) Expectations for choice consequences/outcomes: *"If you work or are self-employed as an "independent worker," what are the chances out of 100 that you will work from home?"*

- Could ask for alternative types of work (independent or not) and multiple outcomes (e.g., hours, wage, satisfaction, insurance).

(B) Choice probabilities under hypothetical "scenarios" or "states:" *"Consider the following self-employment options. In alternative 1, [description of option 1]. In alternative 2, [description of option 2]. What are the chances out of 100 that you would choose each alternative over the other?"*

- Could also elicit expectation that each scenario or state occurs.

3. Understanding Preferences for Independent Work: Using Elicited Subjective *Conditional* Probabilities

(A) Survey expectations for choice outcomes may be used as RHS variables to estimate random utility models ("preferences") in choice situations under uncertainty (e.g., Giustinelli (2016) and references therein).

- And to estimate expected returns to alternative choices/investments (e.g., Arcidiacono et al. (2017), Wiswall and Zafar (2016)).

(B) Choice probabilities under hypothetical scenarios may be used as LHS variables to estimate random utility models ("preferences") (see Manski (1999) for theory and Blass et al. (2010) for an application).

- Giustinelli and Shapiro (2018) use unconditional working probabilities, conditional working probabilities given health, and health probabilities, to study the effect of health on retirement of older US workers.

- Ameriks et al. (2017) use a related method based on "Strategic Survey Questions" (SSQ) to study older workers' preferences for work flexibility and other job characteristics. See also the ALP-based study by Maestas et al. (2017).

4. Predicting the Effects of Policies on Independent Work: Using Subjective *Conditional* Probabilities

- Predicting the effects of policies
  - The hypothetical scenario may be a policy: *"If [policy X], what are the chances that you will be working or self-employed as an "independent worker"?"*
  - See Delavande and Rohwedder (2017) for an application to changes in Social Security benefits in the US.

- Investigating the trade-offs of policies
  - It may be possible to use survey expectations and related methods to quantitatively investigate the potential trade-offs involving some of the social protection policies under discussion.
  - Thinking of insurance, Finkelstein and McGarry (2006) and Hendren (2013, 2017) have used subjective expectations for long term care utilization, disability, survival, and job loss to investigate issues related to asymmetric information, adverse selection, and moral hazard in insurance markets related to social protection.

THANK YOU!

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