Discount Rates, Labor Market Dynamics, and Income Risk

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Cannonical Theory of the Firm: Grossman and Hart (1986), Hart and Moore (1990), Moore (1996)

- Economy consists of non-human assets (e.g., physical, IPR, ... "assets") that can be owned and people who cannot be owned but can become "employees". Incomplete contracts.

- There are **complementarities** between the ability of an employee to access a given non-human asset and returns to **investment in employee's human capital**.

- This complementarity implies that an employee's incentive to make human capital investment depends critically on whether she has access to the asset that is complementary to her human capital, and who provides such access to the asset.

- **"Firm": Investing employee & asset & asset's owner.** Employee and asset owner split gains from the relationship: "wage" and "capital gain".

Theory of the Firm vs. Model

Assumption #1: Human capital accumullates at exogenous deterministic rate g_E when an individual is employed.

- Employees make no decisions about investment in human capital.

Assumption #2: Linear production technology that depends on productivity shocks and human capital only: $y_{i,t} = A_t h_{i,t} z_{i,t}$.

- There are no non-human assets ("real capital") and thus no possibility of complementarities between human capital investments and real capital.

Assumption #3: Firms do not own anything and the notion of who owns firms is muted.

- Key question of the theory of the firm is how to allocte ownership over non-human assets to make employees invest in human capital optimally. Not considered in the model.

Theory of the Firm vs. Model

Central elements that the canonical micro-theory understands to define firms (ownership of non-human assets), employment (investment in human capital that is asset specific), and wages (part of gains from complementarities between human capital investments and real assets) are not part of the model.

Not a complaint about this particular model. These class of models are done in this way, including some of mine. A reflection of how far appart different fields of economics are, even when talking about absolutely fundamental concepts.

Can we do better?

Role of Human Capital in the Model

Key model ingredients are linear in the level of worker's human capital h. This modeling choice is key to all main results.

Total wage from a worker-firm relationship

- Up-front search cost paid by the employee: $c_t(h) = \bar{c} A_t h$

- Benefit of being out of emploeyment: $b_t(h) = \bar{b} A_t h$

- Firm's cost to post a job vacancy: $\kappa_t(h, z) = \bar{\kappa} A_t h z$

Path of realized worker's wages

- Flow reputation cost when a worker is fired is $f_t(h) = \xi A_t h$, which sets an upper bound on wages (firm's IC constraint).

- Flow reputation cost when a worker voluntarily quits is also $f_t(h)$, which sets a lower bound on wages (worker's IC constraint).

Comments

I would like to understand the importance of not allowing investment in human capital for the model's economics and outcomes.

Furthermore, permitting human capital investment would enable a more accurate alignment between the model and the data.

- Job destructions ony depend on productivity shock, if $z < z^*$, and are independent of human capital. Empirical relevance? For example, workers with long vs. short tenure with a firm, or workers with long vs. short employment history.

- Model only features worker-firm mutually "agreed" job separations (those on equilibrium path). In the data, we either have "layoffs" or "quits" (to other firms, self-employment, or entrepreneurship).

Comments

- Low (high) income workers are low-z (high-z) workers. In the data, income is largely driven by the level of human capital.

- Rich firm dynamics in the data: entry/exit, firm-size distribution. The model does not have heterogenous firms. Mismatches between firms and human capital due to this heterogenity arguably drive job reallocations.

- On the one hand, the model is "simple" due to linearity in h. On the other hand, it is a bit hard for a reader to understand why the results obtain. There are multiple forces that seem to operate for all workes, but these forces have different relative strenghts for low-z vs. high-z workers.

- Model features 3 shocks and many parameters. It is expected to match many moments. What is the benchmark for "sufficient number of moments" being matched?

Summary

Great topic. Very interesting key empircial result.

What is the economic mechanism behind this result?

Does the model have key elements of employee-firm relationship and main features of wage setting process inside firms that are needed to marry the model with the data?

Promising work that complements labor economics and labor-finance papers that are mostly relying on reduced-form empirical methodology.

Good luck with the paper!

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