

IDE Research Bulletin

Research Summary based on papers prepared for publication
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Youth unemployment and labour market participation in Southern Africa

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Policy Brief
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I Overview

This research project was funded by IDE between the Fiscal Year 2014 and 2015, and conducted by Seiro Ito (IDE) and Rulof Burger (Stellenbosch University). The purpose of the project was to find out the correlates of unemployment and understand the mechanism behind it. To this end, multiple waves of field survey was conducted to construct a panel data set in townships of Western Cape, South Africa. In the initial wave, we have randomly sampled 620 youths, aged 20 to 35, from two urban townships near Cape Town. In the subsequent wave, we followed up 420 respondents from one township.

During the course of project, we have produced three background papers. Two are theoretical papers motivated by field observations and collected data, one on job search and another on elicitation of three discounting factors. Third paper is empirical analysis on job turnover and employment spells.

As a backdrop to background papers, we report that the youth unemployment rates to be high: 52% for males and 56% for females. We also noted that educational achievement reaching matriculation does not affect the job market status in a statistically significant way, but being in an early (older) cohort does. This reconfirms the doubts cast in policy arena that having matriculation diploma is no longer advantageous in labour markets.

II Heterogenous match efficiency

In this paper, we showed a model with one-sided endogenous match efficiency. It is assumed that schooling can enhance match efficiency, and people will choose the schooling level optimally to balance its costs and benefits of enhanced match efficiency. Assuming a financial market imperfection which limits individuals to borrow, we showed that, in equilibrium, when educational achievements can be characterised by dichotomy (secondary vs. tertiary), tertiary education gives higher wages even it only has pure match efficiency (signalling) value with no human capital value. We also showed that relative match efficiency *vis-à-vis* its mean matters in wage levels.

III A three factor model of discounting

When asked about the consumption choices in the future, a respondent may discount the future beyond what is suggested by standard exponential discounting. For example, an individual may feel tiring to consider about the choices of distant future. Tired of waiting and thinking about the future, one may show little tolerance to wait further and choose the larger consumption once it arrives. Alternatively, a terminally ill patient may discount the utility gain/loss heavily if one is asked about 10 years from now. If the question is posed against the concurrent consumption, there shall not be such disproportionately heavy discounting.

Montiel Olea and Strzalecki (2014) have axiomatically developed an algorithm to infer the parameters of $\beta-\delta$ model of cognitive bias (present and future biases discussed in Ainslie and Haslam, 1992; Laibson, 1997; Loewenstein, 1987; Rubinstein, 2006; Sayman and Öncüler, 2009; Takeuchi, 2011). While this is extremely useful, it allows the implied β to become very large when the response is impatient in the future choices relative to present choices, i.e., when there is a strong future bias. In

particular, when the accepted future waiting period is short and δ is small, β becomes astronomically large.

In the field study conducted in a township of South Africa, the responses to the questions that follow Montiel Olea and Strzalecki (2014)'s algorithm suggest the tolerable waiting period to be long in the present choices but short in the future choices. If we use the standard $\beta - \delta$ model, or single exponential discounting, implied β becomes extremely large because δ obtained from the future choice is smaller and tolerable waiting period s for a bigger reward is less than 1 (day). Because β is derived by taking a reciprocal, this $(1/\delta^s)$ will have a disproportionately large effect on the implied value. While it is easy to dismiss such a response as an error or inability to understand the question, the intention of this paper is to show it is possible to reconcile it with a rational choice framework. The intuition behind assuming a doubly exponentiated discounting function is a heavy penalty of waiting until future. This can be interpreted as wait fatigue or low survival probability felt in the individual's mind.

IV Labour market turnovers among South African youths

We have used the sampled data from two urban townships in the Cape Town, South Africa. We have utilised the rich job history information collected and estimated the duration models for initial unemployment spells, and then estimated the impacts on subsequent employment.

The striking results are that we observe a negative correlation between initial unemployment spells and employment intensity. When we look at the 5 year employment intensity, there is a two percent decrease in the intensity for a month of initial unemployment spell. A 2 percent is about 1 month in 48 months. Therefore there seems to have an almost one-to-one tradeoff between initial and subsequent spells. Another notable feature is that matriculation and having matriculated adults in the household increase the employment duration. Given that they operated in the opposite directions in the unemployment spells, this may be indicative of network effects that once getting a job, having matriculation of own or family members provide job security.

参考文献

- Ainslie, G and N Haslam, "Hyperbolic discounting," in George F Loewenstein and Jon Elster, eds., *Choice over time*, Russell Sage Foundation, 1992, pp. 57–92.
- Laibson, David, "Golden Eggs and Hyperbolic Discounting," *The Quarterly Journal of Economics*, 1997, 112 (2), 443–478.
- Loewenstein, George, "Anticipation and the valuation of delayed consumption," *The Economic Journal*, 1987, 97 (387), 666–684.
- Olea, José Luis Montiel and Tomasz Strzalecki, "Axiomatization and Measurement of Quasi-Hyperbolic Discounting," *The Quarterly Journal of Economics*, 2014, 129 (3), 1449–1499.
- Rubinstein, Ariel, "Discussion of "Behavioral Economics"," *Econometric Society Monographs*, 2006, 42, 246.
- Sayman, Serdar and Ayse Öncüler, "An Investigation of Time Inconsistency," *Management Science*, 2009, 55 (3), 470–482.
- Takeuchi, Kan, "Non-parametric test of time consistency: Present bias and future bias," *Games and Economic Behavior*, 2011, 71 (2), 456 – 478.