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An Interim Report on Township Employmemt

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Yutaka Arimoto[†] Nobuhiko Fuwa[‡] Seiro Ito[§] Satoshi Ohira[¶]

Abstract We have conducted a two year panel survey in four townships in the vicinity of a medium sized industrial city. While the area offers a variety of job opportunities, the unemployment rates, especially among the youth, are strikingly high. Educational achievements among the employed and the unemployed do not differ below high school diploma, suggesting the lack of signaling functions of high school education. It is also shown that the search methods among the job searchers to be inefficient in terms of time and money which require personal visits to potential employers without dependable prior information. Another popular search method emphasizes the importance of network in finding jobs, which is another manifestation of inefficiency in labor markets.

Keywords: Job search, unemployment, township.

[†] Institute of Economic Research, Hitotsubashi University.
[‡] Institute of Asia-Pacific Studies, Waseda University.
[§] Development Studies Center, Institute of Developing Economies.
[¶] Faculty of Economics, Keio Univeristy.

TABLE 1: TOWNSHIPS

Size: Number of stands

1. Damonsville (East of Brits, 10km): 150
2. Lethlabile (North east of Brits, 22km): 2300
3. Mothutlong (East of Brits. 15km): 500
4. Oukasie (North east of Brits, 4km): 4000

⁂ Stand: House number unit

I Introduction

I.1 Townships around Brits

The aim of the survey is to assess the current employment situation and the job seeking behavior of job searchers in peripheral townships of South Africa. We have chosen Brits as the nodal city which offers a variety of employment opportunities in mining and manufacturing sectors, also being within 3 hour distance from two of the big cities, Johannesburg and Pretoria, and surrounded by formerly Black townships that are still growing in size with immigrants. Townships are known to have high proportions of the unemployed, and relative proximity to cities and large scale employers seem to give us an opportunity to understand employment status transitions.

We have chosen four townships around Brits. Locational and size information is given in TABLE 1. These townships differ in their origin. Oukasie, the oldest township of four, is known for political upheaval during the apartheid era. The township enjoys the proximity to Brits yet remains to be one of the least policed and least secure townships. It is also one of the most active townships in terms of job search activities. Naturally we have many migrants, some illegal, who tend to reject our interview requests. Damonsville is another old township. It has relatively stable population base, yet it has seen an increase of informal settlements on its outskirt by the migrants who are seeking jobs at nearby mines. Mothutlong is a township close to Damonsville seeing more rapid expansion. There are two large mines (platinum and ferrochrome) which offer the chance of employment, but it is a short 20 minute ride from Brits as well. Lethlabile is the remotest of all, with at least 30 minutes by taxi ride. Yet it is a proper town by itself in the sense that it has well planned residential zones and street names and proper stand numbers, and it also has a branch of supermarket chains.

Among these four townships, Oukasie stands out in terms of job opportunities. Mothutlong also offers chances in the mining sector, but their labor demand is not stable due to relatively small number of employers. Damonsville offers similar labor market prospects as Mothutlong yet is rather small whose job related outcomes cannot be readily generalized. Lethlabile has

FIGURE 1: TOWNSHIP LOCATION

the job opportunity on its own that originates from residential services and construction works. But the scale of such labor demand is much smaller than Oukasie which boasts the larger and wealthier population and manufacuring base in Brits.

I.2 Sampling

We have selected these four townships by constructing ring-like strata of distance from Brits. Oukasie belongs to the most proximate stratum, Damonsville and Mothutlong belongs to the second proximate stratum, and Lethlabile is in the further stratum. We could have chosen further townships, such as Jericho, but they are closer to Pretoria than to Brits and it becomes difficult to infer the impacts of distance. In the semi-follow up survey which we sampled two other townships, Majakaneng and Moiletswane, we have expanded our sampling universe to the west and north west of Brits. Majakaneng is between Brits and Rusenburg, and Moiletswane is between Rustenburg and Pretoria.

Households are sampled by housing material strata and stand numbers. We have conducted a census of all stand numbers in each township. Then dwellings of each stand is classified into tin or brick strata according to the materials used for dwellings. It is possible to have more than one dwelling in a stand, and hence different type of materials for each dwelling in the same stand, but this was rarely observed. We picked a household in each stratum of houses. We did find multiple households living in a same stand, and when we found this, we randomly chose the household using preselected random sequence of numbers. So the choice sequence is: material stratum, stand, dwelling, household.

For each household, we have conducted an individual interview whose member is aged between 15 and 55. We have obtained information on education, occupation, age, and sex for other members.

We undertook the interviews with prior appointments. We also offered a small reward (R. 20 coupon) for it. After a year in the second round, we had lost almost a quarter of the respondents

Table 2: Sample Attrition

- 2009-2010: 2 year panel

year	total	Damonsville	Lethlabile	Mothutlong	Oukasie
2009	972	75	242	143	512
	⇩				
2010	705	31	183	96	395

- Tracking rate 72.5%: low
  - ➠ High mobility of residents
    - ☞ Household=Residence of joint households.
    - ☞ Single member household=Job seekers, migrants

due to attrition. Main reason of attrition was moving. While we do not have information on the reasons to move for everyone, when there is some person left in a household, we asked for reasons.

In forming a two-year panel, we had a high attrition rate of 27.5%. The high attrition rate is due mostly to high mobility of residents in these townships. It is well known that kinship network plays an important role in livelihood of South Africans. Edmonds et al. (2005) shows that a receipt of pensions increases the household size due to cohabitation of extended household members. Young job seekers are mobile and are said to make use of kinship network. Also from our data set, many respondents cite that referral from kinship members to be an important source of job opportunities.

I.2.1 Survey questions

For the interviewed members, we have asked their job histories, current employment status, job search activities, job search network, and hopes and perception on the future. We have followed the Quarterly Labour Force Survey for the definition of employment status. We have also followed the QLFS in defining the job types of regular and piece. Regular jobs and piece jobs are usually distinguished by the existence of contract. If there is a termination date specified, it is called a contract job, if not, a permanent job. Piece jobs do not have formal contracts, and remuneration and employment duration are specified verbally. One exception is "long term piece job" where there is no formal contract yet there exists mutual expectation (or an implicit contract) that current employment relationship will continue indefinitely. So regular jobs roughly correspond with formal and permanent/long term, while piece is more likely to be informal and of short duration. In the respondents' perceptions, piece job workers are generally considered as unemployed, as they are not always available. Employed is defined as having worked at least one hour during the last seven days. Even with this relatively inclusive employment definition, the unemployment rates are quite high in these townships.

It is of our interest to understand the transition between these job types. To do so, we have followed up for 1 year in two rounds of surveys on the same individuals. In each round, an

Table 3: Sampling

1. Townships
   - Close to Hernic Ferrochrome mine (commuting distance)
   - have a history of established as a black township
2. Households
   - Stratify by house materials (tin/brick)
   - Random sampling of stand numbers within strata
   - Multiple households in a stand: Random sampling of a household via dwelling number and household number
3. Individuals: 16-55 ages

Table 4: Methodology

1. Listing of stand numbers and house materials→stratified random sampling
2. Recording GPS coordinates(for follow up)
3. Setting individual appointments
4. Structured questionnaire interviews
5. Rewards for interviews: R.20 / person, with an extra R.20 to household head when complete

individual is asked about their employment status and their job types. Individuals are asked about the job search activities for the last 14 days and 1 year. They are meant to capture the detailed time allocations in their job search and type of search methods they use, respectively. Irrespective of employment status, all individuals are asked about the job search because some will search for other jobs while they are still employed.

We obtained information on the job search network by asking about the layers of people, family, relatives, friends and neighbours, that they inquire about the jobs. The motivation is twofold; first, the current labor literature on job search is deeply involved in the impacts of job search network, and, second, a group of respondents claim that informal referral within a network is important in finding jobs.

Finally, we have asked about the prospects for the future. This section was originally not planned. But we felt compelled to ask as it seemed that individuals with long unemployment spells, say, for five years, seemed to have lost a hope on finding regular jobs completely. As the job offer arrival rate is hard to predict for anyone, subjective employment prospects can be important in explaing the job search behavior and the consequent employment status.

TABLE 5: QUESTION MODULES

1. Roster (age, gender, education, occupation)
2. Employment (current, history of last three)
3. Job search (last 1 year, last 14 days)
4. Job search network
5. Prospects for future

II Descriptive statistics

In four townships, the unemployment rates in 2009 are staggeringly high for the young individuals: Over 75% for below 25 years old. Above 25 years old see a rapid decline in unemployment rates, but prime age adults below 40 still have unemployment rates of about 40% (FIGURE 2). The picture does not seem to change after one year, and below 20 unemployment rate is over 75% yet some sizeable reduction in 21-25 unemployment to a little above 60% (FIGURE 3).

One may consider tracing the possible reasons of high unemployment rates to educational achievement. In FIGURE 4 for all adults aged 15-55, we have found that, for the highest completed educational achievement in 2009, there is a spike in grade 11, a year before high school completion. Given that foregoing literature suggests that there may be a premium to high school diploma, and given the observed high rate of youth unemployment, it may be worthwhile to encourage high school completion.

However, once we tabulate the employment status by educational achievements, we find that there is considerable similarity between the employed and the unemployed. In fact, in FIGURE 5, the distribution of educational achievements look strikingly similar. This indicates that, although it is suggested that there may exist an earning premium to high school diploma, our data shows that educational achievements do not seem to serve the signaling function. This may reflect the low quality of (public) high school education in predominantly black townships.

In FIGURE 6, we compare the job search methods in 2009 and 2010. In both years, majority of job seekers enquired at employers by visiting the possible employers at their doorstep. In the second popular mode, they went to a mine to apply for an entry level helper position. These top two job search methods have a common features that job searchers must take a risk of not being able to find any vacant position after incurring a search cost by roaming over the possible employers. This is an inefficient way of searching a job, especially if one resides in a relatively distant townships and has to take a taxi.

The third popular method of job search is inquiring the employed relatives and friends for any vacant positions. While there can be a rational reason for the employers to rely on

Figure 2: Unemplotment rates by age group, 2009

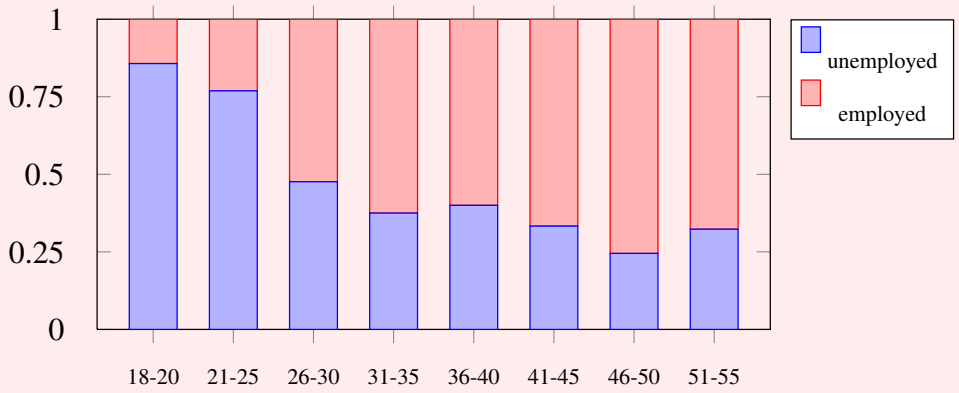
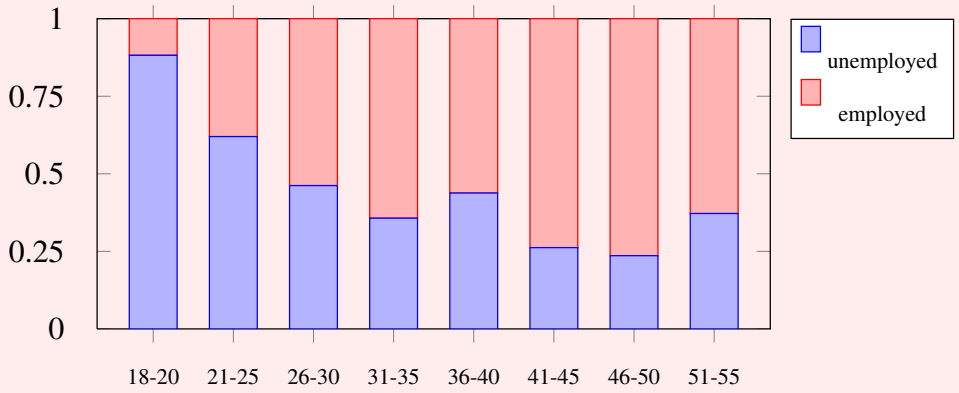


Figure 3: Unemployment rate by age group, 2010



the network of existing employees, this also suggests inefficiency in the labor market that, without network connections, one has a smaller chance of being employed irrespective of innate productivity.

In Figure 7, we show the employment status transition. In the vertical axis, we have 2009 employment status, employed and unemployed. In the horizontal axis, we have 2010 employment status, employed, unemployed, and moved out of residence. We see that unemployment rates among the adults are 47.3% in 2009 and X in 2010. Among the employed in 2009, 56% (29.5% of all individuals) remain employed, 12% become unemployed (6.4% of all individuals), and 32% (16.8% of all individuals) moves out of the residence. Among 47.3% unemployed, 21% successfully became employed, 36% remain unemployed, and 43% moved out of residence. This shows that job security is frail and the chance of being employed is low. The higher proportion of attrition among the unemployed may be interpreted as that people relocating with high mobility for the better job search prospects.

III Closing remarks

We have conducted a two year panel survey in four townships in the vicinity of a medium sized industrial city. While the area offers a variety of job opportunities, the unemployment

Figure 4: Years of Education

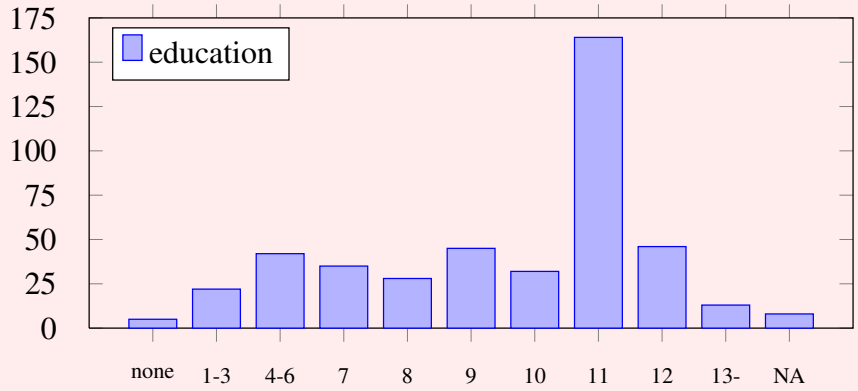
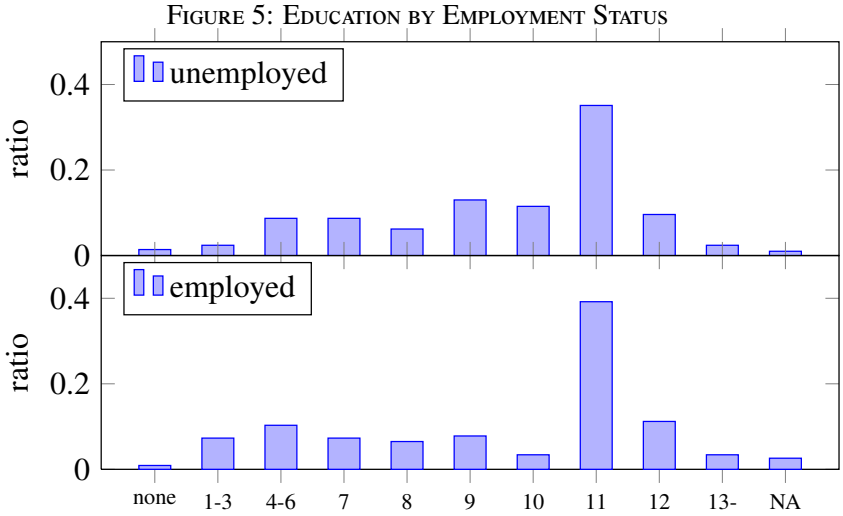


Figure 5: Education by Employment Status



rates, especially among the youth, are strikingly high. Educational achievements among the employed and the unemployed do not differ below high school diploma, suggesting the lack of signaling functions of high school education. It is also shown that the search methods among the job searchers to be inefficient in terms of time and money which require personal visits to potential employers without dependable prior information. Another popular search method emphasizes the importance of network in finding jobs, which is another manifestation of inefficiency in labor markets.

References

Edmonds, Eric V., Kristin Mammen, and Douglas L. Miller, "Rearranging the Family?," *Journal of Human Resources*, 2005, *XL* (1), 186–207.

FIGURE 6: JOB SEARCH MODES

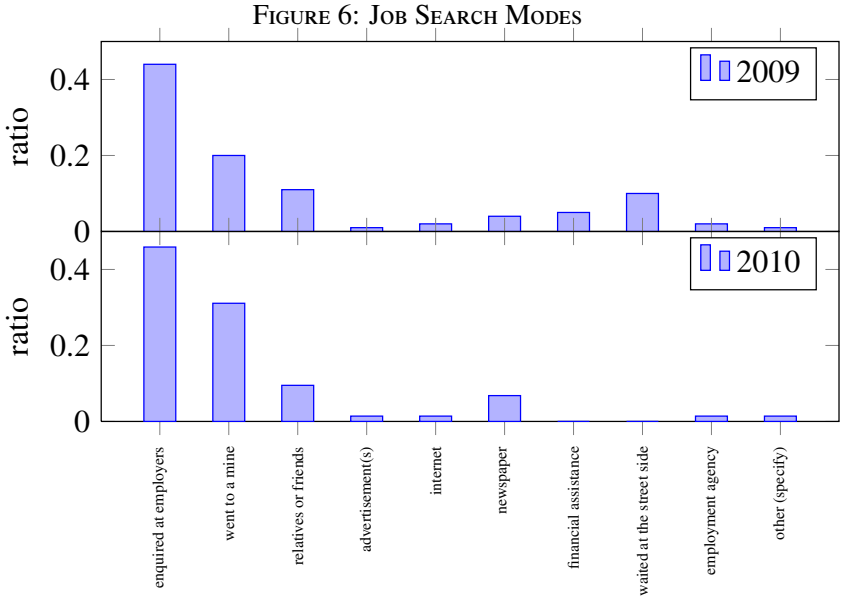


FIGURE 7: EMPLOYMENT STATUS TRANSITION