Employment Transitions of Youth and Health Implications in Egypt

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Outline

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This raised the question what is the effect of such vulnerabilities on the health outcomes of youth

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1. What is the effect of transitioning from non-employment to employment on mental illness?

2. Are there differences in this effect according to job characteristics, particularly job stability and formality, capturing the level of objective job security (particularly temporary employment, seasonal/casual employment or informal employment) compared to staying in non-employment?

3. How are women affected compared to men?

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- using panel data from Survey of Young People in Egypt (SYPE) for the waves of 2009 and 2014
- starting with non-employed individuals in 2009
- comparing the outcomes for the treatment groups to those who remained non-employed (control group) in 2014

The common trend assumption of the diff-in-diff

To ensure that this assumption is not violated:

- conduct propensity score matching to create a comparable control group for the probability of being treated
- estimated through a logit model
- use pre-treatment variables in the matching (in 2009)
- ensure that the covariates are balanced

Outcome variable: Mental illness

Questions capturing the mental health in the SYPE

Table 1: Mental health questions in SYPE

#	Mental health (Yes or no questions)
1	Do you often have headaches?
2	Is your appetite poor?
3	Do you sleep badly?
4	Are you easily frightened?
5	Do your hands shake?
6	Do you feel nervous, tense or worried?
7	Is your digestion poor?
8	Do you have trouble thinking clearly?
9	Do you feel unhappy?
10	Do you cry more than usual?
11	Do you find it difficult to enjoy your daily activities?
12	Do you find it difficult to make decisions?
13	Are you unable to resume your daily work?
14	Are you unable to play a useful part in life?
15	Do you lose interest in things?
16	Do you feel that you are a worthless person?
17	Has the thought of committing suicide been on your mind?
18	Do you feel tired all the time?
19	Do you have uncomfortable feelings in your stomach?
20	Are you easily tired?

Source: Survey of Young People in Egypt, SYPE 2009 and 2014.

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- A dummy variable:
  0 for those with no mental illness
  1 for those who suffer from a mental illness

Treatment variables

Possible destinations from a non-employment state

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- unconditional employment
- differentiation between permanent, temporary and seasonal/casual employment
- differentiation between formal and informal employment
  Informal employment is defined as the absence of having a contract or social insurance.

Baseline variables in the PSM

Individual characteristics:

- gender,

- age,

- age squared,

- ever married status and an interaction between ever married and being a female

- position in the household (head of the household, spouse or others).

- years of education

- the educational attainment of the individual (no education, primary and preparatory education, secondary and post-secondary education, and university and post-graduate)

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- Individual's plans to save money for retirement
- The region of residence (rural, urban or informal/slum area)

Mental illness trajectories of treatment and control groups
Employed vs. non-employed
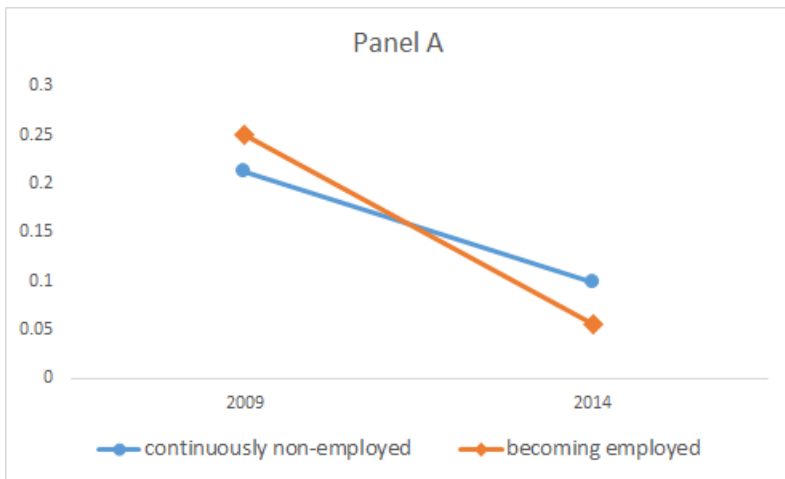
Mental illness trajectories of treatment and control groups

permanent employment vs. non-employed

Mental illness trajectories of treatment and control groups
temporary employment vs. non-employed

Panel C

- continuously non-employed
- becoming temporary empl.

Mental illness trajectories of treatment and control groups

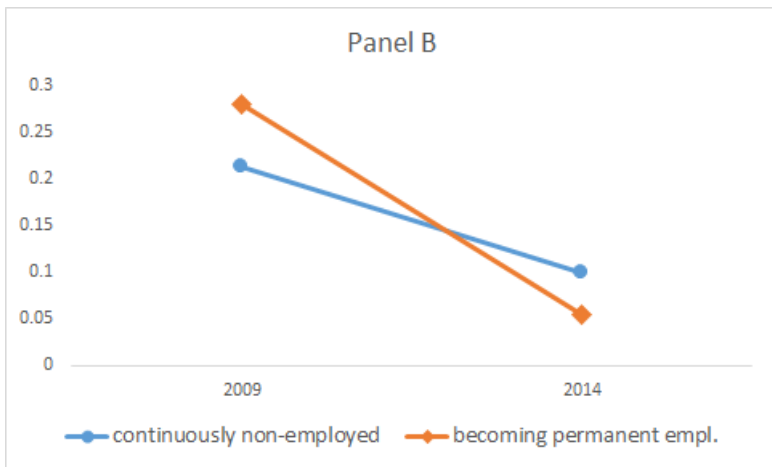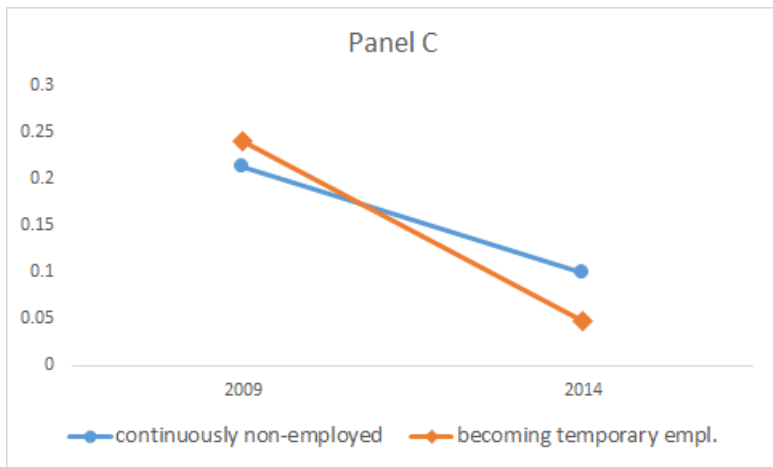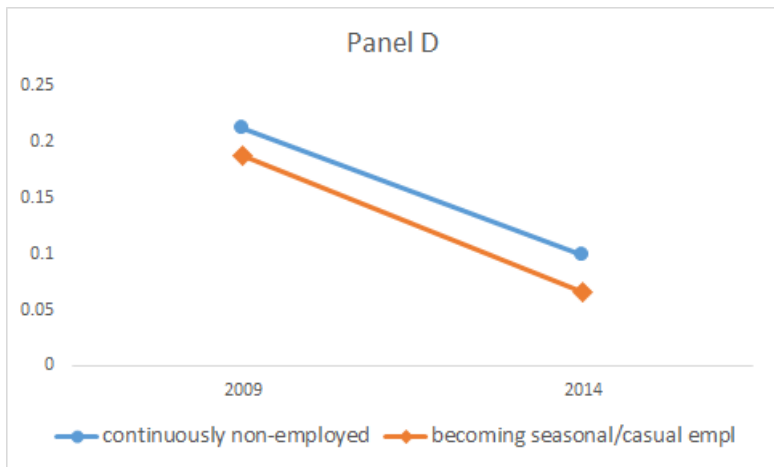seasonal and casual employment vs. non-employed

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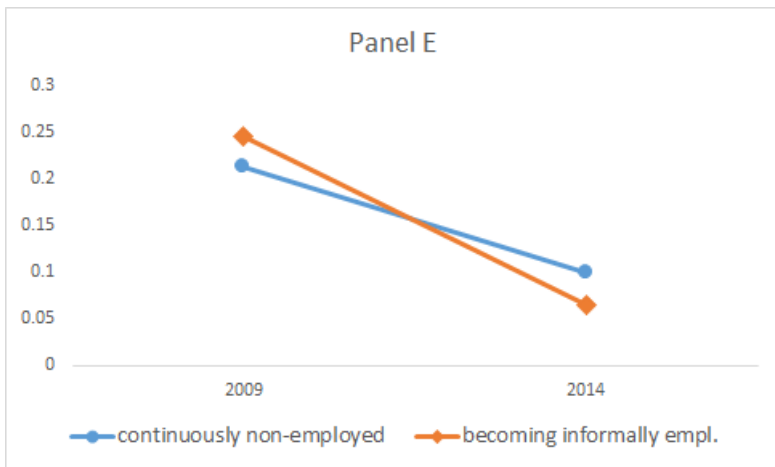
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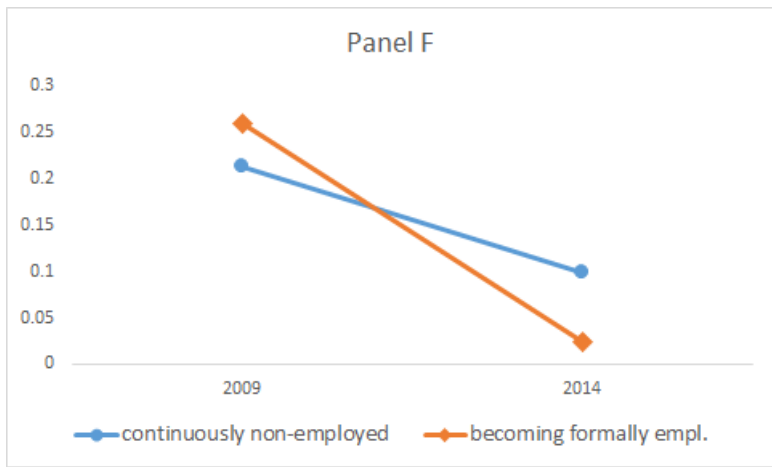
Assessing the balance of covariates

The matching algorithm for all treatment variables is the 10th nearest neighbour with the exception of informal job which is matched with Kernel propensity score matching

Table 2: Standardised mean and median bias

	Mean bias	Median bias
Transition to any employment	1.7	1.3
Job stability:		
Permanent job	1.7	1.3
Temporary job	4.4	3.8
Seasonal or casual job	3.9	3.3
Job formality:		
Informal job	3	2.6
Formal job	2.1	1.8

Source: Author's calculations based on SYPE 2009 and 2014.

Assessing the balance of covariates for sub-samples

The matching algorithm for all treatment variables is the 10th nearest neighbour with the exception of informal job which is matched with Kernel propensity score matching

Table 3: Standardised mean and median bias for sub-samples by gender

	Women		Men	
	Mean bias	Median bias	Mean bias	Median bias
Transition out of non-employment to:				
<u>Any employment</u>	2.7	2.5	2.2	1.8
<u>Job stability</u>				
Permanent job	1.9	1.8	4.4	4.1
Temporary job	3	2.2		
Seasonal or casual job	2.7	2.8		
<u>Job formality</u>				
Informal job	2.1	1.7	3.5	2.1
Formal job	3.2	3.1		

Source: Author's calculations based on SYPE 2009 and 2014.

Results: Effect of employment transitions

Table 4: Average treatment effect on the treated

Outcome variable: Mental illness	ATT		S.e.	Bootstrapped s.e.	N_t
	Without matching	With matching			
Transition					
out of non-employment to:					
Any employment	-0.0796	-0.065	0.023	0.026*	864
Job stability					
Permanent job	-0.112	-0.099	0.029	0.030*	488
Temporary job	-0.079	-0.078	0.043	0.045***	164
Seasonal or casual job	-0.009	-0.0004	0.036	0.037	212
Job formality					
Informal job	-0.067	-0.067	0.023	0.028**	773
Formal job	-0.122	-0.112	0.039	0.046**	209

Notes: Bootstrapped standard errors (S.E.) (200 repetitions).

Nt: number of treated individuals.

Number of control individuals: 1444.

*,**,*** denote significance at 1%, 5% and 10% levels

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Results: Heterogeneous effects by gender

Table 5: Average treatment effect by gender

| Outcome var.: mental illness[1] | Gender | ATT | | S.e. | Bootstrapped S.e. | Nt |
		Without matching	With matching[4]			
Transition out of non-employment to:						
Any employment[2]	Women	-0.072	-0.071	0.027	0.031**	718
	Men	-0.101	-0.084	0.044	0.052	140
Job stability						
Permanent contract	Women	-0.104	-0.080	0.032	0.034**	408
	Men	-0.135	-0.125	0.058	0.065***	75
Temporary contract	Women	-0.084	-0.095	0.048	0.056***	136
Seasonal or casual job	Women	0.007	0.041	0.041	0.051	176
Job formality						
Informal job[3]	Women	-0.060	-0.048	0.027	0.030	550
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    - The characteristics of the job affect the psychological health of the individual
    - The more stable and formal the job is, the better is the mental health of the individual
    - Transitioning to an unstable job (seasonal or casual) have the same effect on the individual's psychological health as staying in in non-employment
    - The magnitude of the effect is higher for men compared to women but the trends are the same compared to the whole sample

Thank You!