

A Service of

ZBW

Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre for Economics

Doruka, Ömer Tuğsal; Pastore, Francesco

Working Paper Getting stuck in the status quo ante: Evidence from the Egyptian Economy

GLO Discussion Paper, No. 1018

Provided in Cooperation with: Global Labor Organization (GLO)

Suggested Citation: Doruka, Ömer Tuğsal; Pastore, Francesco (2022) : Getting stuck in the status quo ante: Evidence from the Egyptian Economy, GLO Discussion Paper, No. 1018, Global Labor Organization (GLO), Essen

This Version is available at: https://hdl.handle.net/10419/248705

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



WWW.ECONSTOR.EU

Getting stuck in the status quo ante: Evidence from the Egyptian Economy[#]

Ömer Tuğsal Doruk^a and Francesco Pastore^b

^aCorresponding author: Ph.D. in Economics, ORCID ID: 0000-0002-2382-1042, Adana Alparslan Türkeş Science and Technology University, e-mail: <u>otdoruk@atu.edu.tr</u>; GLO Fellow

^bPh.D. in Economics, Associate Professor of Economics, Department of Economics, University of Campania "Luigi Vanvitelli", Corso Gran Priorato di Malta, I-81043, Capua (Caserta), Italy. e-mail:

> francesco.pastore@unicampania.it. ORCID ID: 0000-0002-8156-1453. GLO Fellow, and IZA Fellow

[#] Acknowledgements. An earlier draft of this paper was presented at the first Annual Conference on Alternative Policy Solutions, held at the American University of Cairo in December 2019. We thank all seminar participants and especially Ragui Assaad for some insightful comments. However, the responsibility for any remaining errors or misinterpretation is only of the authors.

Getting stuck in the status quo ante:

Evidence from the Egyptian Economy

Abstract

In this study, for the first time, to our knowledge, we use the propensity score matching algorithm to estimate the probability to remain 'stuck in the status-quo ante' across generations in Egypt. We use repeated cross-sectional data relative to a 20-year period from 1998 to 2018 to build transition matrices of intergenerational occupational mobility. The findings of the econometric analysis hint at a low degree of occupational mobility, with children of fathers in the agricultural sector or holding a blue- or white-collar job remaining linked to the profession of their fathers in most cases and experiencing only rarely upward mobility from agricultural to blue- and white-collar jobs.

Keywords: Intergenerational occupational mobility, Status quo bias, Propensity score matching, Egypt

JEL classification: C35; D64; J24; J62; L16.

Introduction

Following the seminal contributions of Blau and Duncan (1967), Featherman and Hauser (1975), Erikson and Goldthorpe (1992), both economists and sociologists have been researching the determinants of intergenerational occupation mobility meant as a form of social mobility.

The Egyptian economy has a long-lasting employment guarantee program which was initiated in the early 1960s. The employment guarantee program is well documented in the current literature (see Assaad, 1997; Bayat, 2002; Richards& Waterbury, 2008). However, the Egyptian labor market may exhibit social barriers able to prevent the possibility for an individual whose father is an agricultural worker of moving to a higher more prestigious and complex occupation. The transfer of occupations from fathers to their children is called intergenerational occupational transfer, whereas the move to a more prestigious occupation than that of own father is called upward intergenerational occupational mobility. The case of a move from a white-collar job to a blue-collar or agricultural job is called downward intergenerational occupational mobility.

In this paper, we propose a novel methodology to assess the probability of a child of remaining stuck in the status quo ante, namely the occupation of her/his father: the propensity score matching (PSM) approach. This is used for the first time in the literature in this paper to select samples of children with exactly the same observed characteristics of their peers except for the occupational status of their parents. Then, we compare the probability to experience an upward mobility for individuals that are otherwise similar, except for the occupational status of their parents. In particular, we compare similar children of fathers who work in agriculture and of young people whose fathers is working in a blue- or white-collar job.

As explained in more detail in the methodological section, the matching approach is based on a two-step procedure. At step one, we estimate the probability to have a father in agriculture in terms of a number of individual characteristics and, based on this estimate, we extract a random sample of individuals with exactly the same characteristic, but with a father owning a blue collar (or a white collar) job. The two samples are chosen in such a way to have a very similar value of the propensity score, which is computed based on the probability model of having a father in agriculture. At step two we run another probit model to see which of the two groups has a higher probability to find a blue (or a white collar) job, namely the children of fathers working in agriculture or the children of fathers working in a blue- or white-collar job. Thereafter, we compare also the probability to find a white-collar job for children of fathers working in blue and in white collar jobs.

We focus on the Egyptian economy and use the Labor Market Panel Surveys (LMPS) for Egypt, for which we own the 1998, 2006, 2012, and 2018 survey cross-section rounds¹. The case of Egypt is interesting under many respects: first, it is a dynamic economy, experiencing important periods of structural change around the Arab spring (2011) period which is covered in our data (see Assaad et al., 2019 for an overview of recent economic changes in the country's economy). The ongoing structural change is a possible driving factor of occupational mobility and certainly a low degree of intergenerational occupational mobility may be a factor able to slow down the process of structural change and economic growth, by reducing the supply of labor and human resources available in the expanding manufacturing and services sector. This may happen to a greater extent if the labor force is constrained by their skill level, developed across generations in the agricultural sector and there are not sufficient training programs to allow young people from the agricultural sector to take on jobs in the expanding manufacturing and service sectors.

¹ See Assaad (2014) and Krafft (2021) for a discussion of the advantages of the dataset at hand, closely linked to the time-varying nature of the data.

The main benefit of using the ELMPS is that we can observe the time-varying probability of being stuck in the status-quo ante over a very long period of time, which is rarely available for other countries. We can compare the situation up to 20 years apart and follow the process of structural change through changes in the occupational structure of the society.

The matching estimator allows us to produce the best "like for like" estimates of intergenerational mobility, also compared to other countries. In other words, we control for any possible source of bias due to omitted heterogeneity at least on observable differences among target (young people with parents in agriculture) and control group (young people with parents in blue-collar and white-collar jobs). A well-known limitation of our PSM approach is that it cannot control for unobserved heterogeneity, which would be there if, say the children of fathers working in agriculture had a greater/lower motivation or talent for social mobility than the children of fathers in other types of occupations. However, our methodology should provide more accurate measures of the occupational stability/mobility than previous estimates based on Logit or other more traditional models, in as much as they control better for observed heterogeneity and sample selection bias.

Our findings show that the probability of a young person to remain stuck in the status-quo ante is very high and persistent, even over a 20 year's time period.

We submit that our empirical approach and the data available allow us shedding a new light on the intergenerational occupational mobility in the country considered. We expect that our PSM approach be followed also by future studies relative to other countries so as to provide terms of comparison for the findings of this study.

The remaining part of the paper is organized as follows. Section 2 presents a literature review and defines the main hypotheses to be tested. Section 3 provides discussion of methodology and data. Section 4 presents the main findings of the econometric analysis. The concluding section discusses the findings, data limitations and policy suggestions.

Literature Review

In the MENA context, social mobility is a much-debated social issue, but still in need of being fully addressed from an empirical point of view. Much of the discussion remains, therefore, ideological. Empirical evidence is still missing, while anecdotal evidence points to very low social mobility across generations. There is a scarce and apparently inconsistent literature on intergenerational social mobility in the MENA Region. Most of the studies that examine the intergenerational social transfer are based on the education transmission across fathers and their sons' pairs. Nugent and Saleh (2009) found that intergenerational educational mobility was on the rise, and that parental education had positive influences on the returns to children's education that go well beyond its direct influence on children's education. Assaad and Krafft (2021) find the reverse by using the 2012 survey dataset of the ERF. They state that only 10% of the offspring had the same level of education as their fathers.

Binzel & Carvalho (2017) find that there is low degree of social mobility in Egypt. Binzel (2011) finds both low occupational and educational mobility in Egypt in 2006, namely in the pre-Arab Spring period. Probably, this was one of the underlying forces of the Arab spring.

Assad (2014) underlines that the labor market in the Arab countries in general, and in Egypt in particular, has a very high youth unemployment rate, while there has been a declining trend in the public sector share of employment, due to increasing budget constraints on public finances. Assaad (2014)'s analyses are based mostly on the pre-Arab Spring period, but his conclusions are still valid in the post-Arab Spring period. This macroeconomic context might have affected the degree and extent of intergenerational transfers in the country, by reducing the opportunities to find public sector jobs, which is especially important for women.

In addition, Ibrahim (1982) found a substantial degree of social mobility in Egypt in 1978, hinting at the possibility that social mobility was higher in the past than it is now. However, there is little systematic and comprehensive evidence.

Researching occupational mobility across generations is important for the MENA countries, as this type of research is still neglected in these countries. Moreover, to our knowledge, there are no previous studies specifically focused on occupational mobility. With our paper we try to fill an important lacuna in the current literature both by focusing on an understudied country and by proposing the matching approach from a methodological point of view.

In the Egyptian economy, the historical transformation of the labor market has an important role and has represented an important constraint because the high degree of rigidity has meant that workers have remained stuck in the status-quo ante for decades, possibly slowing down the process of structural change and the related process of economic growth. One positive outcome of the Nasser regime, back in 1962, was that higher education was made and has remained free for both man and woman (see Antoninis, 2001). As Assad (1997), Assaad (2008), Barsoum (2004) emphasized, right after this free education movement, employment in the public sector was guaranteed for the graduates from vocational secondary, and post-secondary schools starting from 1964. This was a gender-blinded hiring policy and the life expectations of woman in Egypt has changed since this public employment guarantee policy in the early 1960s.

Assaad (2008) emphasizes that the policy for public employment guaranteed program shaped the expectations of employment for well-educated Egyptians (see Sieverding, 2015 for women employment in Egypt). In addition, studies by the WEO (2017), IMF (2019) and ILO (2021) stress that there is a need to create more jobs for the Arab countries by 2025. The discrepancies between increasing educational outcomes and a staggeringly low degree of job creation appear to be one of the main reasons for the existing gap between social and education mobility in Arab countries (Driouchi & Gamar, 2016).

With our study, we cover one of the key countries in the much-neglected MENA region: Egypt. We do so by introducing an important methodological novelty in the existing literature, not only that relative to MENA countries, namely the matching approach to estimating the degree of intergenerational occupational mobility.

Hypotheses

The hypotheses of the present study are as follows.

Hypothesis 1: A child whose father holds an agricultural job has a lower chance to get an occupation in higher ranked jobs (blue- or white-collar jobs) relative to her peer whose father is a blue-collar or a white-collar worker.

Hypothesis 2: Also, a child whose father is a blue-collar worker has a lower chance to access a white-collar job than her peer whose father was already in a white-collar job.

These hypotheses are implicitly based on a social ranking of occupations (from agricultural jobs, to blue- and white-collar jobs). Before testing these hypotheses by means of our matching approach, we provide some descriptive empirical evidence based on transition matrices of intergenerational mobility at an occupational level between fathers and children.

Dataset and Methodology

In our transition matrix estimations, at the beginning, we prefer to use all available occupational categories (according to the ISCO 88 classifications) to examine the social mobility across generations, rather than only the three main categories of agricultural jobs, blue-collar and white-collar jobs. The classification is as follows:

* Managers

* Professionals

* Technicians and associate professionals

* Clerical support workers

* Service and sales workers

* Skilled agricultural, forestry and fish

* Craft and related trades workers

* Plant and machine operators, and assemblers

* Elementary occupations

In our propensity score matching analysis, however, for shortness' sake, we use the ISCO classification, based on which we determine the white-collar and blue-collar jobs according to the criterions defined below. We define an occupation as a white-collar job if it falls in one of the following ISCO codes:

- Managers
- Professionals
- Technicians & associate professionals
- Clerks

Second, we define blue-collar jobs those including the following occupations:

- Service workers, and shop, and market sales workers
- Crafts and related trade workers
- Plant and machine operators
- Elementary occupations

The third category includes workers in agriculture. As noted above, we assume that these workers have a lower-than-average chance of entering one of the above-mentioned occupations: blue collar and white-collar jobs.

Transition Matrices Estimations

In the present study, we also estimate the transition matrices, which are a well-known empirical tool in the social mobility literature. We compute different types of PkxK transition matrix. They are studied, first by means of two synthetic indices and then analyzed in detail to understand the actual extent of intergenerational occupational mobility/stability. The first index, the Prais-Shorrock (1978), is based on Equation 1:

Prais (trace)
$$(K-1)-1$$
 {K - trace(P)} (1)

It is a tool to measure the overall degree of social mobility in a country. When the index is close to 1, it shows a very low degree of social mobility.

Another indicator is the Bartholomew (1973) index, which is defined as follows:

$$\left\{ K(K-1) \right\}^{-1} \sum_{i} \sum_{j} p_{i,j} \left| i - j \right|$$
(2)

This index is used to estimate the average jump across occupational classes to examine the occupational mobility across generations and understand the overall degree of social mobility across generations. When the index takes a value close to 0 it suggests perfect occupational mobility across generations. The higher the Bartholomew index, the lower is the average jump of social classes across generations.

Table 3 shows that, according to Bartholomew and Prais-Shorrocks indexes, Egyptian children are stuck at the occupation of their fathers, denoting a low degree of social mobility

transmission. In fact, the Prais-Shorrock index is around 0.84 and 0.86, which is very close to 1, while the Bartholomew index is around 0.26 and 0.29, namely close to 0.

Propensity Score Matching Method

The Propensity Score Matching approach, established in Rosembaum & Rubin (1983) and extended by Heckman (1997), is generally used for two purposes in applied works: first, to reduce non-random sample selection bias in a given sample, and, second, to compare differences across a target group and a control group. It is considered a quasi-experimental approach, since it compares the outcome of a target group and a control group, the latter being chosen for having exactly the same observed characteristics of the target group, except for one characteristic, which is the treatment. In the last two decades, it has become an increasingly popular method in economics, for its properties of statistical accuracy and effectiveness, especially in the context of cross-section data. The main aim of the PSM approach is obtaining propensity scores, which are denoted as e(X) and are used to select individuals from the control group.

The PSM approach is developed in two steps. In the first step, we estimate a probit model of the probability that the father of all the individuals aged 23 or more is involved in an agricultural job (our treatment), in terms of a number of observed variables:

$$Pr(Y_{j} \neq 0 | X_{j}) = \Phi\left(\beta_{0} + \beta_{1}G + \beta_{2}edf + \beta_{3}edc + \beta_{4}I + \beta_{5}W + \beta_{6}R + \sum_{i=1}^{20} \beta_{i}Gov_{i}\right)$$

$$(3)$$

Where Y_j denotes the probability of an individual to have a father involved in an agricultural job (the target group) as a function of gender (*G*), the education level of fathers (*edf*), the education level of offspring (*edc*), household income (*I*), household wealth (*W*), living in a rural area (*R*), one of the 20 governorate where the offspring is living in $(\sum_{i=1}^{20} Gov_i)^2$. Equation (3) is estimated by a standard probit model. The education levels of fathers and children are defined as follows: illiterate, reads&writes, less than intermediate, intermediate, above intermediate, university, and postgraduate. Living in a rural area is a dummy variable that takes 1 if the offspring is living in a rural area, 0 otherwise. Household income is measured as total of basic wage income (for 3 months) for each member within a household. For governorate dummies, we use dummy variables for each governorate that the offsprings are living in as follows: Alexandria, Port Said, Saez, Damietta, Dakahlia, Sharkia, Kalyoubia, Kafr-Elsheikh, Gharbia, Menoufia, Behera, Ismailia, Giza, Beni-Suef, Fayoum, Menia, Asyout, Suhag, Qena, Aswan, and Luxur.

Based on (3), we predict the propensity score of the individuals in the control group (with parents owning, first, a blue and, later, a white-collar job) with exactly the same characteristics as the target group. We use the nearest neighborhood matching approach without replacement and with common support option.

In the second step, after having identified the control group with a father in a blue- or a whitecollar job by selecting the individuals with the closest propensity scores to those having a father in agriculture, we compute, by probit again, the average treatment effect on the treated (ATeT) or the probability of an individual whose father was employed in agriculture to find a blue-, first, and a white-collar job, later (outcome variable) as compared to an individual whose father had already a blue or a white collar job. As noted above, with our methodology, we are able to

² We use the household wealth score estimated by ERF. We cannot use the number of siblings as a covariate since there is not a sufficiently large number of observations to do first-stage probit, and the psm estimations.

compare individuals with exactly the same characteristics, except for the fact that their fathers have a different occupational background. The outcome variable is the probability to move up the social ladder from the occupation of their father to a superior occupation, namely a blue- or white-collar job.

We compute standard errors of these estimates by bootstrapping since the first step standard errors are downward biased if they are used in the second step³.

. In our case, there is common support for almost all the individuals in the sample. Moreover, to check the efficiency of our matching procedure, we test for statistically significant differences between target and control group in terms of the observed characteristics mentioned above before and after matching. We will show that our matching procedure reduces to non-statistical significance all pre-matching differences in observed characteristics.

We define our measure of 'relative social mobility" by using our estimated Average Treatment Effect on Treated (henceforth, ATeT) which can be defined as follows:

$$E(AgF_1 - OF_0 | D = 1) = E(AgF_1 | D = 1) - E(OF_0 | D = 1)$$
^[4]

In our case, AgF_1 is the treatment group, which is the offspring having a father with an agricultural occupation, OF_0 is the control group (offspring have fathers with occupation other than agricultural: blue- or white-collar workers).

Estimation Results

Transition Matrix Estimations

Before analysing the transition matrices, we propose the aforementioned indices of mobility for all the years considered (Table 1). The table shows that both indices point consistently and

³ As Rosenbaum and Rubin (1983) note, it is difficult to establish an asymptotic approximation to the distribution of matching estimators when a matching variable is estimated in a first step. Therefore, the bootstrapped errors are used in the present study as it is usually the case in the PSM literature.

concurrently to a very low degree of intergenerational occupational mobility all over the 20 years considered. In fact, the Shorrock index tends to 1, while the Bartholomew index tends to 0. There seems to be little difference over time and, probably, such differences are not statistically significant.

Table 2 provides the transition matrix estimations across generations in 1998 for all occupational categories. The column of the matrix reports the occupation of fathers and the row represents the occupation of their offspring. The Tables 3 through 5 present the same transition matrices for each of the following waves of the survey. The ERF occupational classifications used in the survey are based on the ISCO 1988 classification. Only 9 occupational categories can be used. We drop the armed forces occupations since they fall outside of the aims of the present study (we cannot classify it as a white-collar, blue-collar, or agricultural occupation). Table 2 shows a high degree of persistence across generations of especially the agricultural and the white-collar occupations in 1998.

The highest degree of persistence belongs with the child whose father is an agricultural worker. If we consider the entire period covered in our data, there is a high degree of immobility for the occupational categories of service and sales workers, clerks, technicians and associate professionals, and elementary occupations. For white-collar workers, there is also a high degree of persistence across generations. The findings based on Table 2 suggest that most children were stuck at the status-quo ante in the Egyptian economy at the end of the 1990s.

[Insert Table 2]

[Insert Table 3]

[Insert Table 4]

Overall, the transition matrices contained in the tables from 2 to 5 allow us assessing the long-run evolution of the probability to remain stuck in the status-quo ante. Table 4 suggests that occupational immobility across generations still continues, although the percentages slightly shrink in 2006. Similarly, Table 5 confirms the high degree of persistence of the occupational structure across generations for white-collar and agricultural occupations, but the persistence of white-collar occupations is lower than that in 1998, while that relative to agricultural occupations is lower than that in 2006. The degree of persistence of the social structure increases for white-collar occupations from 1998 to 2012. In 2018, the degree of persistence decreased, though it remained still high, especially for professionals. The transition matrix relative to 2018 proposed in Table 5 shows that the degree of social immobility for the white-collar occupations decreases compared to 1998. For children of parents employed in the service sector and sales workers, the degree of social immobility becomes persistent across generations.

[Insert Table 5]

For White, Blue, and Agricultural Occupation Classifications

Table 6 gives the transition matrices with the classical three categories occupational classification for each round of the survey from 1998 (panel a) to 2018 (panel d). In other words, we group the previous 9 ISCO categories in the three main ones. The table suggests that the children of parents working in the agricultural sector experience the highest degree of persistence within that occupation (from about 61% in 1998 to about 64% in 2018), followed by children of parents working as white collar workers (from 46% in 1998 to 56% in 2018) and,

eventually, by children of parents working as blue collar workers (from about 44% in 1998 to about 39% in 2018). In other words, the agricultural occupations are the most persistent ones, but they are followed, quite surprisingly, by the children of parents involved in white collar jobs, rather than manual jobs. The latter is the least immobile category, probably due to the weakness of the manufacturing sector in the country and the relatively low level of expansion it has experienced over the last decades.

When we compare the matrices over time, we can see a high degree of persistence of this pattern: first are children of parents in the agricultural sector, then of white-collar parents and eventually of manual workers. The differences over time are not particularly sizeable. This confirms the high degree of social immobility existing in the country over a long period of time. In turn, the latter is a sign of a relatively stagnant production structure with little evolution of the size of sectors in terms of employment shares.

This notwithstanding, there are also signs of upward social mobility from agriculture to blueand white-collar jobs and from blue to white collar job: from 20 to 30% of children experience upward mobility, according to the year and type of job. There are also cases of downward social mobility from white collar jobs to manual jobs and agriculture. Again, the shares involved are of an order of about 20%.

[Insert Table 6]

Propensity Score Matching Analysis Results

Our propensity score matching estimation results are reported in the following tables. We compare the probability to occupy a given job for children of fathers with different occupations with any other child with a father in other occupations. The Tables 7 and 8 present the psm

estimate of the probability of the offspring of an agricultural worker to move to a blue-collar job, compared to that of the offspring of a blue-collar worker and of a white-collar worker for all years considered. The Tables 9 and 10 present the PSM estimate of the probability of the offspring of an agricultural worker to move to a white-collar job, compared to that of the offspring of a blue-collar worker and of a white-collar worker for all years considered. For the sake of clarity, the first stage probit estimation coefficients obtained from the unmatched samples are given in the right columns of each table as a term of comparison to see the effect on the raw and unconditional coefficient to change once controlling for omitted heterogeneity on observables.

Having a father whose occupation is in agriculture implies a lower probability to move up the social ladder in all years. The coefficient is always negative for moves to blue-collar jobs for the offspring of an agricultural worker compared to the both the other control groups confirming the presence of a gap against individuals whose father is working in an agricultural job, but also the low appeal and diffusion of blue-collar jobs (Tables 7 and 8). The ATeT results of our PSM estimations show that the offspring of fathers working in agriculture has a lower probability to become a blue-collar worker than the offspring whose father is blue-collar worker. Such a relative probability reduces from -6% in 1998 to -9% in 2018 and is always statistically significant (see Table 7).

The offspring of fathers working in agriculture has a lower probability to reach blue-collar occupations than their peers whose father works in white-collar occupations. The probability is -7% in 1998; it decreases to -5% in 2012; and -4% in 2018 (see Table 8).

[Insert Table 7]

[Insert Table 8]

Table 9 shows the relative probability of becoming a white-collar worker for the offspring of a father working in agricultural occupations compared with the offspring of a father working as a blue-collar worker. When we compare these two groups, the former has a higher probability than the latter, with values of around 1 ppt in all years, except for 2012, when the value equals 8 ppt.

[Insert Table 9]

Table 10 shows that the probability for the offspring of a father working in agriculture to become a white-collar worker relative to their peers whose father works in white-collar occupations. It is sometimes positive and sometimes negative, but always very small in absolute value. The relative probability is around 1 ppt., and the relative probability is positive of 1, 1 and 0.2% in the following years, respectively.

[Insert Table 10]

Interestingly, the impact is larger and show a higher statistical significance in the case of the probability to reach a blue, rather than a white-collar job. The former coefficient is in most years, sizeable and highly statistically significant. The latter coefficient is, instead, in most years close to zero, though remaining statistically significant.

The Tables 11 and 12 compare the offspring with a father owning an agricultural job with the offspring of fathers in blue- and white-collar occupations, respectively, in the probability to remain in an agricultural occupation. Table 11 shows the relative probability to become an agricultural worker for the offspring whose father works in agriculture relative to their peers whose father works in a blue-collar occupation: their coefficients fluctuate between 2 and 8 ppt.

For the offspring whose father is an agriculture relative to their peers whose father is a whitecollar worker the probability to become an agricultural worker is also positive and fluctuates between 4 and 7 ppt (Table 12).

[Insert Table 11]

[Insert Table 12]

In a nutshell, our findings based on matching confirm the main conclusion drawn from inspection of the intergenerational transition matrices, namely that there is a very low degree of social mobility across generations, especially for the offspring whose father is an agricultural worker. Surprisingly, becoming a white-collar worker is more likely for the offspring who has a father in agriculture relative to the offspring of a blue-collar worker. Such type of mobility is persistent over the 20 years considered.

Efficiency of the PSM estimates

The diagnostic test results show that there is no statistically significant difference between the observed characteristics of the matched samples, although differences between the unmatched samples were statistically significant and sizeable. This confirms the effectiveness of the matching approach in reducing only to the treatment variable the difference between target and control at least in terms of observed characteristics. The relevant tests and figures are given in Appendix A.

Appendix A also reports Figures that show that there is common support in the estimates of psm. These figures show that there is a wide variation in the common support to control for the different characteristics that were used in the PSM procedure and documented in Equation [1]. These wide variation in the common support is adequate for the PSM method (see Pastore & Pompili, 2020). Moreover, the common support is also found to be generally more complete

and satisfactory when there is a large number of observations from which the control group is selected (see Pastore & Pompili, 2020).

Robustness Checks

As a robustness check, we use the Mahalanobis matching methodology (MM, henceforth). The MM is a more flexible methodology than the propensity score matching method. MM matching is very useful and effective to overcome the anomaly problems in the dataset. As Pastore and Pompili (2020) show the MM method completely eliminates the statistical differences in the observed characteristics of the target and control group, as it selects as control group only observations which are almost identical in terms of observed characteristics to one observation in the target group. We run all the estimates above (see the Tables 13 through 18) and find very similar coefficients to the ones found with PSM.

[Insert Table 13]
[Insert Table 14]
[Insert Table 15]
[Insert Table 16]
[Insert Table 17]
[Insert Table 18]

Concluding remarks

In the present study, we examine the process of intergenerational social mobility, especially across occupations, in an important MENA country, Egypt, over the 20 years covered by the

PLFS (1998, 2006, 2012, 2018). We use the repeated cross-sections of the data. We do so by means of transition matrix estimations first with 9 and then with 3 grouped occupational categories. At an ensuing step of the analysis, we estimate by propensity score matching (and by Mahalanobis distance for robustness check) the probability for the offspring of agricultural workers to find a blue- or a white-collar job. With the same approach, we compare the offspring of blue-collar workers and white-collar workers to access other types of occupations. The estimates provide a vivid picture of the extent of downward and upward occupational mobility in Egypt over the long period of observation considered. PSM estimates are used to compare the like with the like and, indeed, at the first step of the analysis, we select samples of offspring from other social groups based on a propensity score obtained from a probit analysis of the observed determinants of the target group. Each social group is used as a target and a control group in successive estimates to compare the occupational groups with each other. The matching approach allows us comparing groups that differ only for the treatment, which is belonging to a given occupational category rather than the other, after obtained matched samples with exactly the same observed characteristics.

We submit that the very low degree of social mobility existing in the country is the consequence of the low level of economic development and structural change, while also being able to prevent further economic development, by constraining the necessary condition of structural change from agriculture to manufacturing and services. Social mobility is key to economic development and growth not only for the MENA countries, but for all developing countries and may represent a constraint to the process of structural change which may be a pre-condition for economic development. We contribute to the understanding of the process of structural change by studying the trends in terms of social and occupational mobility by controlling for the observed heterogeneity of the different social groups and the possible sample selection bias that may accrue as a consequence of observed heterogeneity. We find that the offspring of fathers who work in the agricultural sector has a lower chance than the offspring of a father working in a blue-collar occupation but not compared to the offspring of a white-collar worker. Therefore, our results indicate that many young people remain stuck in the status quo ante across generations. This applies especially for the offspring of agricultural workers. We find also a high degree of social immobility among the offspring of white-collar workers. These social phenomena depend on the archaic nature of the agricultural sector and its stability over time in the country considered, but also on the stagnancy of the manufacturing sector, which is probably located in the low to middle skill levels of production and is therefore crashed between low- and high-skill intensive countries' competition in international markets. The public sector still maintains a certain stability of employment over the decades, granting to a middle to upper class in urban areas to maintain their living standard.

Our analysis helps identifying special social groups to whom to address special policy interventions. Policy intervention may be addressed to reduce the borrowing constraints in Egypt, so as to favor the creation of more enterprises and jobs and, at the same time, social mobility. Moreover, the policy makers should consider the talented children of fathers working in agriculture for their education and occupation policies. Skill upgrading of productions can be fostered with adequate incentives to R&D and innovation by firms, in addition to public investment in material and immaterial infrastructures. Albeit Egypt is a well characterized country for free higher education and public job guarantee programs which has been implemented since the late 1960s, there has been a growing trend of decreasing public jobs in Egypt. In Egypt, lower-level educational institutions should develop cognitive as well as soft skills for children with a poor occupational background. Higher secondary schools and university should provide also work-related skills and work experience. Last, but not least, for

the current population, training policy for those wishing to move out of the agricultural sector should be provided for free.

References

Antoninis, M. (2001). The Vocational School Fallacy Revisited: Technical Secondary Schools in Egypt. San Domenico di Fiesole Italy: European University Institute.

Assaad, R. (1997). 'The effects of public sector hiring and compensation policies on the Egyptian labor market', World Bank Economic Review 11(1), 85–118.

Assaad, R. (2008). "Unemployment and Youth Insertion in the Labor Market in Egypt." In The Egyptian Economy: Current Challenges and Future Prospects, edited by Hana Khayr a IDin, 133–78. Cairo: American University in Cairo.

Assaad, R. (2014). Making sense of Arab labor markets: the enduring legacy of dualism. *IZA Journal of Labor & Development*, *3*(1), 1-25.

Assaad, R., & Krafft, C. (2021). Excluded generation: the growing challenges of labor market insertion for Egyptian youth. Journal of Youth Studies, 24(2), 186-212.

Assaad, R., AlSharawy, A., & Salemi, C. (2019, October). Is the Egyptian economy creating good jobs? Job creation and economic vulnerability from 1998 to 2018. In *Economic Research Forum Working Paper Series Working Paper no.1354*.

Barsoum, G. 2004. The Employment Crisis of Female Graduates in Egypt: An Ethnographic Account. Cairo Papers in Social Science. Cairo: American University in Cairo Press.

Bayat, A. (2002), 'Activism and social development in the Middle East', International Journal of Middle East Studies 34, 1–28.

Binzel, C. (2011). Decline in Social Mobility: Unfulfilled Aspirations among Egypt's Educated Youth. IZA Discussion Papers 6139. *Institute for the Study of Labor (IZA)*.

Binzel, C., & Carvalho, J. P. (2017). Education, social mobility and religious movements: The Islamic revival in Egypt. The Economic Journal, 127(607), 2553-2580.

Blackwell, M., Iacus, S., King, G., & Porro, G. (2009). cem: Coarsened exact matching in Stata. *The Stata Journal*, *9*(4), 524-546.

Blau, P. M., & Duncan, O. D. (1967). The American occupational structure.

Caroline, K., Ragui, A., & Wahedur, R. K. (2021). Introducing the Egypt Labor Market Panel Survey 2018. *IZA Journal of Development and Migration*, *12*(1).

Driouchi, A., & Gamar, A. (2016). The gap between educational & social intergenerational mobility in Arab countries.

Erikson, R., & Goldthorpe, J. H. (1992). Individual or family? Results from two approaches to class assignment. *Acta Sociologica*, *35*(2), 95-105.

Featherman, D. L., Jones, F. L., & Hauser, R. M. (1975). Assumptions of social mobility research in the US: The case of occupational status. *Social science research*, 4(4), 329-360.

Heckman, J. (1997). Instrumental variables: A study of implicit behavioral assumptions used in making program evaluations. *Journal of human resources*, 441-462.

Ibrahim, S. E. 1982. "Social Mobility and Income Distribution in Egypt, 1952-1977." In The Political Economy of Income Distribution in Egypt, edited by Judah Abd al -Khaliq, 375–434. New York: Holmes & Meier.

ILO. (2021). Towards a Productive and Inclusive Path: Job Creation in the Arab Region,

IMF. (2019). Financial inclusion of small and medium-sized enterprises in the Middle East and Central Asia. Middle East and Central Asia Department. Departmental Paper No.19/02.

Nugent, J. B., & Saleh, M. (2009). Intergenerational Transmission of, and returns to human capital and changes therein over time: empirical evidence from Egypt. In *Economic Research Forum Working Paper* (Vol. 468).

Richards, A. & Waterbury, J. (2008), A Political Economy of the Middle East, 3rd edn, Westview Press, Boulder, Colo.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. Biometrika, 70(1), 41-55.

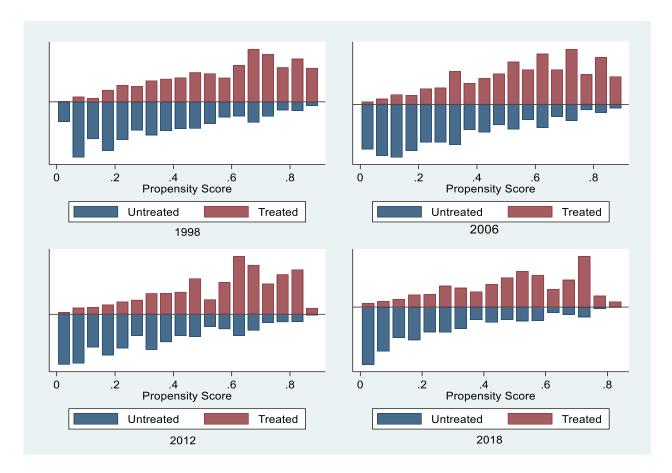
Sieverding, M. (2015, December). Intergenerational mobility in women's employment outcomes in Egypt. Economic Research Forum Working Paper, Vol. 978.

WEO. (2017). The Future of Jobs and Skills in the Middle East and North Africa: Preparing the Region for the Fourth Industrial Revolution, Executive Briefing Report. Available at: <u>https://www3.weforum.org/docs/WEF_EGW_FOJ_MENA.pdf</u> (retrieved on 13th December 2021).

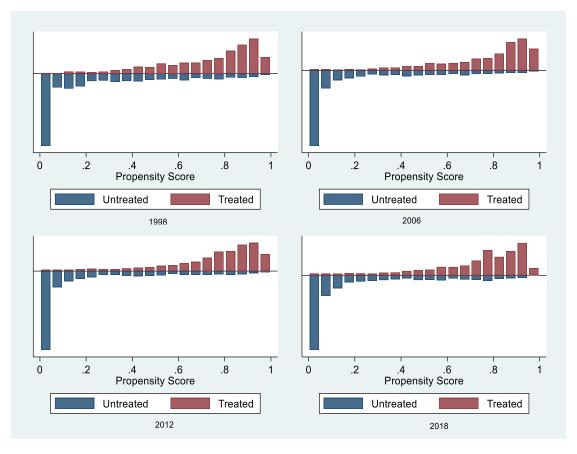
Appendix

PSM Graphs

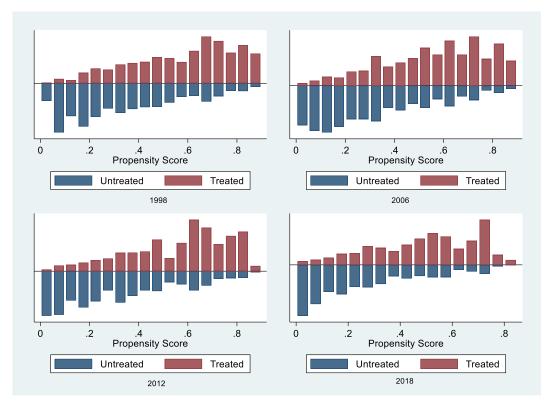
I. Becoming a Blue Collar Worker for the offsprings whose father is an agricultural father relative to a blue-collar father



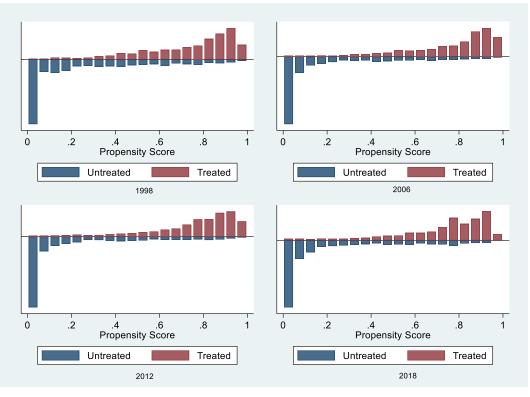
II. Becoming a Blue Collar Worker for the offsprings whose father is an agricultural father relative to a white-collar father



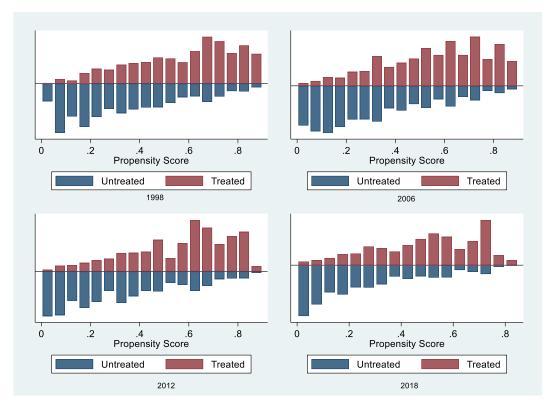
III. Becoming a White Collar Worker for the offsprings whose father is an agricultural father relative to a blue-collar father

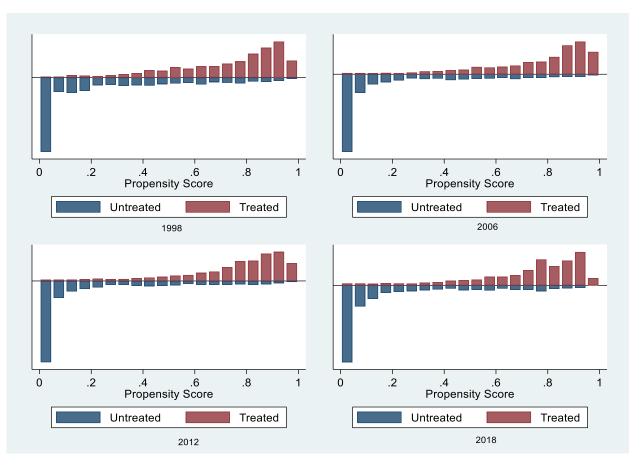


IV. Becoming a White Collar Worker for the offsprings whose father is an agricultural father relative to a white-collar father



V. Becoming an Agricultural Worker for the offsprings whose father is an agricultural father relative to a blue-collar father





VI. Becoming an Agricultural Worker for the offsprings whose father is an agricultural father relative to a white-collar father

PSM T Test Results

I. Becoming a Blue Collar Worker for the offsprings whose father is an agricultural father relative to a blue-collar father

1998

	Mean		t-test
Variable	Treated	%bias	t t p>t
	Control	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· P··
Living in a rural	.7038	-1.8	-0.66 0.507
area	.71246		
Reads&writes	.17987	-1.7	-0.67 0.504
(for a father)	.18729		
Less than	.04208	3.0	1.58 0.114
intermediate	.03342		
(for a father)			
Intermediate	.00866	1.7	1.00 0.316
education level	.00619		
(for a father)			
Above	.00041	-1.7	-1.00 0.317
intermediate	.00124		
education level			
(for a father)			
University	.00165	1.6	0.82 0.414
education level	.00083		
(for a father)			
Reads&writes	.14645	6.6	2.44 0.015
	.12252		
Less than	.19719	-2.9	-1.07 0.285
intermediate	.20957		
education level			
Intermediate	.13861	-1.8	-0.70 0.485
education level	.14563		
Above	.02145	-3.3	-1.22 0.224
intermediate	.02682		
education level			
University	.02847	2.0	0.80 0.422
education level	.02475		
Post graduate	.00041	1.1	1.00 0.317
education level	0		
Alexandria	.01898	-0.9	-0.51 0.608
	.02104		
Port Said	.00413	-0.5	-0.22 0.827
	.00454		
Saez	.0033	-0.4	-0.24 0.808
	.00371		
Damietta	.06064	-2.8	-0.82 0.410
	.06642		

Dakahlia	.04002	4.5	1.63 0.104
Dakamia	.03135	т.5	1.05 0.104
Sharkia	.05135	2.1	0.73 0.464
Sharkia	.04662	2.1	0.75 0.404
Valuantia		-4.0	-1.47 0.143
Kalyoubia	.04002	-4.0	-1.4/ 0.143
U - fr. F 1-1 '1-1-	.04868	2.1	0.66.0.512
Kafr-Elsheikh	.09158	2.1	0.66 0.512
	.08622	0.2	0.06.0.040
Gharbia	.05363	0.2	0.06 0.949
	.05322		0.01.0.0(1
Menoufia	.00784	-2.1	-0.91 0.364
	.01031		
Behera	.07178	4.3	1.50 0.134
	.06106		
Ismailia	.04455	1.8	0.71 0.477
	.04043		
Giza	.04827	-0.4	-0.13 0.894
	.04909		
Beni-Suef	.08045	-3.8	-1.13 0.257
	.08952		
Fayoum	.07219	4.5	1.38 0.169
	.06229		
Menia	.06147	5.7	1.89 0.059
	.04909		
Asyout	.06642	0.0	0.00 1.000
-	.06642		
Suhag	.04703	-7.4	-2.40 0.017
C	.06271		
Qena	.05817	-0.7	-0.24 0.807
	.05982		
Aswan	.05281	-4.2	-1.36 0.174
	.06188		
Luxur	.00041	0.0	-0.00 1.000
	.00041		
Female	.53878	0.2	0.09 0.931
	.53754		0.07 0.701
Household	199.67	-5.2	-1.79 0.073
Income	221.38	5.2	1.17 0.015
Household	47616 -	1.0	0.36 0.722
Wealth	.48457	1.0	0.50 0.722
vi Caluli	.+0+J/		

	Mean		t-test	V(T)/	
Variable	Treated Control	%bias	t p>t	V(C)	

T :	72245	2.0	1 10 0 271	1	
Living in a rural	.73345	-2.8	-1.10 0.271	•	
area	.7464				
Reads&writes	.15288	-1.4	-0.59 0.554		
(for a father)	.15863				
Less than	.05647	1.7	0.89 0.373		
intermediate	.05108				
(for a father)					
Intermediate	.00755	-1.7	-1.14 0.256		
education level	.01043				
(for a father)					
Above	.00072	-0.6	-0.45 0.655		
intermediate	.00108				
education level					
(for a father)					
University	.00288	0.0	0.00 1.000		
education level	.00288				
(for a father)					
Reads&writes	.11655	-1.3	-0.50 0.619		
	.12086	1.5	0.00 0.017		
Less than	.12000	-5.2	-2.03 0.042		
intermediate	.19209	-3.2	-2.03 0.042		
education level	.21403				
Intermediate	.18813	-0.3	-0.10 0.918		
		-0.3	-0.10 0.918	•	
education level	.18921	1.0	0.46.0.644		
Above	.01439	1.0	0.46 0.644	•	
intermediate	.01295				
education level	0.4047				
University	.04317	0.2	0.07 0.947		
education level	.04281				
Post graduate	.0018	-0.8	-0.30 0.763		
education level	.00216				
Alexandria	.01367	0.5	0.35 0.724		
	.01259				
Port Said	.0036	1.7	1.00 0.317		
	.00216				
Saez	.00468	1.5	0.85 0.393		
	.00324				
Damietta	.06583	0.3	0.11 0.914		
	.06511				
Dakahlia	.04532	3.3	1.27 0.204	.	
	.03849		1.27 0.201		
Sharkia	.05144	-2.5	-0.89 0.374		
	.05683	2.5	0.07 0.374	•	
Kalyoubia	.04209	0.8	0.34 0.736		
Kalyouola	.04209	0.0	0.54 0.750		
Vofr Elsheilth		0.9	0.20 0.770		
Kafr-Elsheikh	.09065	0.9	0.28 0.778	·	
	.08849	07	0.04.0.012		
Gharbia	.0536	-0.7	-0.24 0.813	•	
	.05504				

Menoufia	.00612	1.9	1.14 0.256		
wienouna	.00396	1.7	1.14 0.230		
Behera	.06942	-3.3	-1.13 0.258		
Denera	.00942	-3.5	-1.15 0.258		
Ismailia	.04209	1.9	0.82 0.411		
1811181118	.04209	1.9	0.62 0.411		
Circ		1 1	0.40.0.600		
Giza	.04353	1.1	0.40 0.690	•	
D : C (.04137	1.0	0.04.0.700		
Beni-Suef	.08453	-1.0	-0.34 0.738	•	
	.08705				
Fayoum	.07338	-4.3	-1.40 0.163	•	
	.08345				
Menia	.05899	2.0	0.69 0.487		
	.05468				
Asyout	.07158	3.1	1.17 0.240		
	.06367				
Suhag	.04676	-0.5	-0.19 0.850		
-	.04784				
Qena	.06511	2.6	1.00 0.316		
	.05863				
Aswan	.0464	-5.8	-2.04 0.041		
	.05863				
Luxur	.00036	1.0	1.00 0.317		
	0	1.0			
Female	.52482	1.3	0.48 0.629	1.	
	.51835		0.10 0.02)	·	
Household	412.18	-1.4	-0.74 0.459	0.97	
Income	427.72	1.1	0.71 0.137	0.27	
Household	44189 -	-0.7	-0.25 0.804	0.95	
Wealth	.43651	-0.7	-0.23 0.804	0.35	
weatth	.43031				

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		
Living in a rural	.71597	-5.2	-2.10 0.036
area	.74023		
Reads&writes	.1004	-2.4	-1.10 0.271
(for a father)	.10916		
Less than	.03706	-0.4	-0.27 0.785
intermediate	.03841		
(for a father)			
Intermediate	.0155	0.9	0.54 0.589
education level	.01381		
(for a father)			
Above	.00067	0.0	-0.00 1.000
intermediate	.00067		

	1		
education level			
(for a father)	00101	0.7	1.00.0.217
University	.00101	0.7	1.00 0.317
education level	.00034		
(for a father)	0.4010	0.2	0.12.0.004
Reads&writes	.04919	0.3	0.12 0.904
T 1	.04852		1.00.0.000
Less than	.19744	-2.5	-1.03 0.302
intermediate	.20822		
education level			
Intermediate	.24057	-2.3	-0.93 0.350
education level	.25101		
Above	.01247	-1.8	-0.89 0.374
intermediate	.01516		
education level			
University	.05391	0.4	0.17 0.863
education level	.0529		
Post graduate	.00202	3.2	1.89 0.059
education level	.00034		
Alexandria	.01415	0.3	0.22 0.824
	.01348		
Port Said	.00404	2.4	1.42 0.157
	.00202		
Saez	.00404	-0.7	-0.39 0.694
	.00472		
Damietta	.05829	0.5	0.17 0.867
	.05728		
Dakahlia	.04582	1.2	0.44 0.660
	.04346		
Sharkia	.0465	-4.6	-1.71 0.088
	.05627		
Kalyoubia	.03841	-0.9	-0.40 0.689
	.04043		
Kafr-Elsheikh	.09063	0.3	0.09 0.928
	.08996		
Gharbia	.04919	0.3	0.12 0.904
	.04852		
Menoufia	.00708	0.0	-0.00 1.000
interio unu	.00708	0.0	0100 11000
Behera	.06907	2.8	1.05 0.295
Denera	.06233	2.0	1.00 0.290
Ismailia	.03605	0.8	0.35 0.725
Islimin	.03003		0.55 0.725
Giza	.03706	-2.1	-0.80 0.422
JILa	.03700	2.1	0.00 0.422
Beni-Suef	.08625	-0.9	-0.32 0.748
Dem-Suel	.08023	-0.7	-0.32 0.740
Fayoum	.08801	0.4	0.15 0.880
Tayouiii	.07244 .07143	0.4	0.15 0.000
	.07143		

Menia	.06233	-0.5	-0.16 0.873
	.06334		
Asyout	.07884	1.5	0.54 0.592
	.07513		
Suhag	.05559	-3.1	-1.10 0.271
	.06233		
Qena	.06435	1.6	0.64 0.519
	.06031		
Aswan	.05627	2.0	0.75 0.456
	.05189		
Luxur	.00067	0.0	0.00 1.000
	.00067		
Female	.51988	0.3	0.13 0.897
	.51819		
Household	887.02	-1.3	-0.50 0.617
Income	921.27		
Household	43018 -	-6.6	-2.65 0.008
Wealth	.37851		

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		_
Living in a rural	.72051	-1.4	-0.54 0.588
area	.72704		
Reads&writes	.08457	-1.9	-0.86 0.392
(for a father)	.09111		
Less than	.03303	0.3	0.15 0.880
intermediate	.0323		
(for a father)			
Intermediate	.01996	1.7	1.12 0.265
education level	.01597		
(for a father)			
Above	.00218	-0.5	-0.28 0.781
intermediate	.00254		
education level			
(for a father)			
University	.00218	-0.5	-0.54 0.593
education level	.0029		
(for a father)			
Reads&writes	.07187	3.5	1.29 0.198
	.06316		

	100.11		1.05.0.010
Less than	.12341	-3.3	-1.25 0.213
intermediate	.13466		
education level			
Intermediate	.27804	1.0	0.39 0.695
education level	.27332		
Above	.01633	-1.8	-0.82 0.415
intermediate	.01924		
education level			
University	.05517	0.0	-0.00 1.000
education level	.05517		
Post graduate	.00327	0.0	0.00 1.000
education level	.00327	0.0	0.00 1.000
Alexandria	.01162	0.9	0.65 0.513
Alexaliulia	.001102	0.9	0.05 0.515
$\mathbf{D} \neq \mathbf{O} \stackrel{i}{=} \mathbf{I}$		0.0	0.42.0.000
Port Said	.00363	-0.9	-0.43 0.669
	.00436		
Saez	.00472	1.1	0.63 0.531
	.00363		
Damietta	.06062	1.4	0.46 0.648
	.05771		
Dakahlia	.03702	-0.7	-0.28 0.777
	.03848		
Sharkia	.05082	-2.6	-0.90 0.369
	.05626		
Kalyoubia	.03884	-1.6	-0.62 0.538
illigouolu	.04211		0.02 0.000
Kafr-Elsheikh	.08893	0.1	0.05 0.962
	.08857	0.1	0.05 0.702
Gharbia	.04537	1.2	0.46 0.646
Ullai Ula	.04337	1.2	0.40 0.040
Menoufia	.04283	1.0	0.60 0.548
Menouna		1.0	0.00 0.348
D 1	.00399	1.0	0.40.0.000
Behera	.08494	-1.3	-0.43 0.666
	.0882		
Ismailia	.0363	-1.6	-0.70 0.482
	.03993		
Giza	.04283	-5.1	-1.71 0.088
	.05263		
Beni-Suef	.08312	-1.2	-0.39 0.699
	.08603		
Fayoum	.07877	2.7	0.87 0.387
	.0726		
Menia	.06534	-1.4	-0.48 0.628
	.0686	1.1	0.10 0.020
Asyout	.08203	1.9	0.65 0.518
Asyour	.08203	1.7	0.05 0.510
Subag		-1.2	-0.43 0.670
Suhag	.05045	-1.2	-0.43 0.070
	.05299		

Qena	.05372	0.9	0.36 0.717
	.05154		
Aswan	.05263	4.0	1.51 0.132
	.04392		
Luxur	.00109	0.7	0.45 0.655
	.00073		
Female	.53285	0.7	0.27 0.787
	.52922		
Household	1888.1	-1.0	-0.40 0.691
Income	1959.3		
Household	36785 -	-1.6	-0.72 0.470
Wealth	.35466		

II. Becoming a Blue Collar Worker for the offsprings whose father is an agricultural father relative to a white-collar father

I		
		t-test
Treated	%bias	t p>t
Control		
.7038	-0.3	-0.09 0.925
.70503		
.17987	-3.4	-1.25 0.210
.19389		
.04208	0.5	0.22 0.829
.04084		
.00866	0.5	0.65 0.515
.00701		
.00041	0.3	1.00 0.317
0		
.00165	0.0	-0.00 1.000
.00165		
.14645	-20.5	-6.67 0.000
.2203		
.19719	-1.4	-0.54 0.590
.20338		
.13861	6.2	2.55 0.011
.11427		
.02145	2.3	1.04 0.298
.01733		
.02847	-0.8	-0.42 0.671
.03053		
	Control .7038 .70503 .17987 .19389 .04208 .04084 .00866 .00701 .00041 0 .00165 .00165 .00165 .14645 .2203 .19719 .20338 .13861 .11427 .02145 .01733 .02847	Treated Control % bias .7038 -0.3 .70503 -3.4 .19389 0.5 .04208 0.5 .04084 0.5 .00866 0.5 .00041 0.3 0 0 .00165 0.0 .00165 0.0 .14645 -20.5 .203 -1.4 .20338 -1.4 .13861 6.2 .11427 0.2145 .02145 2.3 .02847 -0.8

Post graduate	.00041	0.8	1.00 0.317
education level	0	0.8	1.00 0.317
Alexandria	.01898	3.3	1.85 0.064
Alexandria	.01898	5.5	1.65 0.004
Port Said	.01238	-1.8	-0.82 0.413
Port Said		-1.8	-0.82 0.415
G	.00578	1.0	0.02.0.405
Saez	.0033	1.2	0.83 0.405
D	.00206		2.05.0.040
Damietta	.06064	-7.0	-2.05 0.040
	.0755		
Dakahlia	.04002	2.3	0.91 0.365
	.03507		
Sharkia	.05116	7.5	2.76 0.006
	.03507		
Kalyoubia	.04002	-5.3	-1.73 0.084
	.05033		
Kafr-Elsheikh	.09158	2.0	0.60 0.545
	.08663		
Gharbia	.05363	-3.5	-1.17 0.241
	.06147		
Menoufia	.00784	-1.8	-0.77 0.444
	.0099		
Behera	.07178	12.6	4.82 0.000
2 • • • • • •	.04002		
Ismailia	.04455	-6.3	-2.15 0.032
Isinaina	.05817	0.5	2.15 0.052
Giza	.04827	-27.1	-6.93 0.000
Giza	.10025	27.1	0.95 0.000
Beni-Suef	.08045	-2.0	-0.62 0.532
Dem-Suci	.0854	-2.0	-0.02 0.332
Eavoum	.07219	8.7	2.85 0.004
Fayoum	.07219	0.7	2.83 0.004
Mania		4.2	1 29 0 166
Menia	.06147	-4.2	-1.38 0.166
.	.07137	0.2	2 40 0 001
Asyout	.06642	9.3	3.40 0.001
	.04414		
Suhag	.04703	-0.8	-0.27 0.788
	.04868		
Qena	.05817	-2.9	-0.90 0.369
	.06436		
Aswan	.05281	4.9	1.83 0.068
	.04167		
Luxur	.00041	0.6	1.00 0.317
	0		
Female	.53878	2.4	0.83 0.404
	.52682		
Household	199.67	-6.5	-2.90 0.004
Income	235.29		
L	1	1	I

Household	47616 -	-2.3	-0.80 0.426
Wealth	.45761		

2006	Mean		t-test
Variable	Treated	%bias	t test
v ariable	Control	700103	t p>t
	Control		
Living in a rural	.73345	-0.2	-0.06 0.952
area	.73417	0.2	0.00 0.952
Reads&writes	.15288	1.1	0.41 0.680
(for a father)	.14892		0.11 0.000
Less than	.05647	3.4	1.70 0.089
intermediate	.0464		
(for a father)			
Intermediate	.00755	0.4	0.65 0.515
education level	.00612		
(for a father)			
Above	.00072	-0.4	-0.82 0.414
intermediate	.00144		
education level			
(for a father)			
University	.00288	-1.0	-1.46 0.144
education level	.0054		
(for a father)			
Reads&writes	.11655	-5.9	-2.26 0.024
	.13669		
Less than	.19209	-1.8	-0.71 0.478
intermediate	.19964		
education level	10010		
Intermediate	.18813	3.4	1.39 0.164
education level	.17374		1.1.6.0.2.15
Above	.01439	-2.4	-1.16 0.245
intermediate	.01835		
education level	04017	1 1	0.60.0545
University	.04317	1.1	0.60 0.545
education level	.03993	1.0	0.71.0.470
Post graduate	.0018	1.2	0.71 0.479
education level Alexandria	.00108	-1.5	-0.88 0.379
Анеханигіа	.01367	-1.3	-0.88 0.379
Port Said	.01035	2.1	1.29 0.196
	.0038	2.1	1.27 0.190
Saez	.0018	0.0	-0.00 1.000
Jacz	.00468	0.0	-0.00 1.000
Damietta	.06583	-7.9	-2.36 0.019
Dannetta	.00383	-1.7	-2.30 0.017
Dakahlia	.04532	-0.9	-0.32 0.750
	.04332	0.7	0.52 0.750
	.07/12		

Sharkia	.05144	3.3	1.26 0.209
	.04424		
Kalyoubia	.04209	-5.0	-1.71 0.087
	.0518		
Kafr-Elsheikh	.09065	-9.5	-2.96 0.003
	.11475		
Gharbia	.0536	-9.2	-3.08 0.002
	.07374		
Menoufia	.00612	-2.3	-1.10 0.273
	.00863		
Behera	.06942	7.6	3.00 0.003
	.05036		
Ismailia	.04209	8.3	3.84 0.000
	.02374		
Giza	.04353	3.8	1.37 0.171
	.03633		
Beni-Suef	.08453	16.3	6.01 0.000
	.04496		
Fayoum	.07338	-3.2	-1.01 0.314
	.08058		
Menia	.05899	2.9	1.11 0.266
	.05216		
Asyout	.07158	5.3	1.90 0.057
	.05899		
Suhag	.04676	-11.3	-3.98 0.000
	.07194		
Qena	.06511	5.0	1.76 0.079
	.05396		
Aswan	.0464	-5.6	-2.21 0.027
	.05971		
Luxur	.00036	-1.1	-1.00 0.317
-	.00108		
Female	.52482	-7.8	-2.91 0.004
	.56367		
Household	412.18	-3.9	-1.44 0.150
Income	449.28		
Household	44189 -	-3.5	-1.31 0.192
Wealth	.41315		

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		_
Living in a rural	.71597	4.2	1.62 0.104
area	.69677		
Reads&writes	.1004	-4.1	-1.64 0.102
(for a father)	.11354		

Less than	.03706	3.0	1.82 0.069
intermediate	.02864		
(for a father)			
Intermediate	.0155	0.1	0.11 0.916
education level	.01516		
(for a father)			
Above	.00067	-0.6	-1.13 0.257
intermediate	.00168		
education level			
(for a father)			
University	.00101	-0.1	-0.38 0.705
education level	.00135		
(for a father)			
Reads&writes	.04919	-5.8	-1.88 0.060
	.06031		
Less than	.19744	-3.9	-1.57 0.116
intermediate	.21395	2.2	
education level			
Intermediate	.24057	5.5	2.26 0.024
education level	.21597	5.5	2.20 0.021
Above	.01247	0.0	0.00 1.000
intermediate	.01247	0.0	0.00 1.000
education level	.01247		
University	.05391	3.3	2.00 0.046
education level	.04279	5.5	2.00 0.040
Post graduate	.00202	0.0	-0.00 1.000
education level	.00202	0.0	-0.00 1.000
Alexandria	.00202	-1.0	-0.64 0.524
Alexaliuria		-1.0	-0.04 0.324
Deut Cell	.01617	2.2	1 42 0 150
Port Said	.00404	-3.3	-1.42 0.156
	.00674		0.66.0.510
Saez	.00404	0.9	0.66 0.512
D. i.u	.00303		1.50, 0.105
Damietta	.05829	-4.7	-1.50 0.135
	.06772		
Dakahlia	.04582	7.1	3.05 0.002
	.03066		
Sharkia	.0465	-0.2	-0.06 0.951
	.04683		
Kalyoubia	.03841	2.5	0.97 0.330
	.03369		
Kafr-Elsheikh	.09063	11.2	4.16 0.000
	.06199		
Gharbia	.04919	-3.2	-1.16 0.245
	.05593		
Menoufia	.00708	-4.7	-2.11 0.035
	.01247		
Behera	.06907	12.1	5.05 0.000
	.03942		
L		1	

Ismailia	.03605	-8.8	-3.60 0.000
Isinanna	.05559	0.0	2100 01000
Giza	.03706	-2.6	-0.93 0.350
	.04178		
Beni-Suef	.08625	6.7	2.32 0.020
	.07008		
Fayoum	.07244	-6.4	-2.06 0.039
-	.08693		
Menia	.06233	2.1	0.82 0.412
	.05728		
Asyout	.07884	-8.1	-2.69 0.007
	.09872		
Suhag	.05559	7.7	3.20 0.001
	.03807		
Qena	.06435	-4.4	-1.53 0.126
	.07446		
Aswan	.05627	-8.2	-3.03 0.002
	.07581		
Luxur	.00067	0.0	0.00 1.000
	.00067		
Female	.51988	1.1	0.42 0.678
	.51449		
Household	887.02	-0.3	-0.14 0.890
Income	896.83		
Household	43018 -	8.0	3.33 0.001
Wealth	.49788		

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		
Living in a rural	.72051	-5.3	-2.04 0.041
area	.74483		
Reads&writes	.08457	0.7	0.29 0.770
(for a father)	.0824		
Less than	.03303	-0.4	-0.22 0.823
intermediate	.03412		
(for a father)			

Intermediate	.01996	0.6	0.49 0.622
education level	.01815		
(for a father)			
Above	.00218	0.5	0.63 0.527
intermediate	.00145		
education level			
(for a father)			
University	.00218	-0.3	-0.54 0.593
education level	.00210	0.5	0.51 0.575
(for a father)	.0027		
Reads&writes	.07187	1.3	0.42 0.674
Reausawilles		1.5	0.42 0.074
	.06897	1.0	1.04.0.150
Less than	.12341	-4.0	-1.36 0.173
intermediate	.13575		
education level			
Intermediate	.27804	-2.6	-1.02 0.310
education level	.29038		
Above	.01633	-1.3	-0.62 0.537
intermediate	.01851		
education level			
University	.05517	2.6	1.60 0.110
education level	.04574		1000 01110
Post graduate	.00327	1.0	0.78 0.438
education level	.00218	1.0	0.70 0.430
Alexandria	.01162	1.3	0.93 0.351
Alexandria		1.5	0.95 0.551
	.00907	0.4	0.00.0010
Port Said	.00363	0.4	0.23 0.818
	.00327		
Saez	.00472	-0.7	-0.38 0.705
	.00544		
Damietta	.06062	-0.2	-0.06 0.955
	.06098		
Dakahlia	.03702	-7.9	-2.86 0.004
	.05299		
Sharkia	.05082	3.3	1.27 0.204
	.04356		
Kalyoubia	.03884	2.9	1.16 0.247
ixaryouoia	.03303	2.7	1.10 0.247
Kafr-Elsheikh		0.4	0 14 0 007
Kall-Elsneikn	.08893	0.4	0.14 0.887
	.08784		1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Gharbia	.04537	3.0	1.14 0.255
	.0392		
Menoufia	.00508	1.3	0.82 0.413
	.00363		
Behera	.08494	-1.5	-0.48 0.632
	.08857		
Ismailia	.0363	-4.5	-1.83 0.067
	.0461		

<u>a</u> :	0.4000	5 4	1.00.0.070
Giza	.04283	-5.4	-1.89 0.059
	.05372		
Beni-Suef	.08312	9.5	3.35 0.001
	.05989		
Fayoum	.07877	3.2	1.02 0.307
	.07151		
Menia	.06534	-5.2	-1.78 0.075
	.07768		
Asyout	.08203	-0.9	-0.29 0.770
	.08421		
Suhag	.05045	-5.9	-2.15 0.032
	.06388		
Qena	.05372	5.9	2.15 0.031
	.04138		
Aswan	.05263	0.6	0.24 0.808
	.05118		
Luxur	.00109	0.8	0.45 0.655
	.00073		
Female	.53285	7.4	2.75 0.006
	.49583		
Household	1888.1	-0.3	-0.10 0.924
Income	1906.6		
Household	36785 -	0.2	0.09 0.929
Wealth	.36944		

III. Becoming a White Collar Worker for the offsprings whose father is an agricultural father relative to a blue-collar father

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		-
Living in a rural	.7038	-1.8	-0.66 0.507
area	.71246		
Reads&writes	.17987	-1.7	-0.67 0.504
(for a father)	.18729		
Less than	.04208	3.0	1.58 0.114
intermediate	.03342		
(for a father)			
Intermediate	.00866	1.7	1.00 0.316
education level	.00619		
(for a father)			
Above	.00041	-1.7	-1.00 0.317
intermediate	.00124		
education level			
(for a father)			
University	.00165	1.6	0.82 0.414
education level	.00083		
(for a father)			
Reads&writes	.14645	6.6	2.44 0.015
	.12252		
Less than	.19719	-2.9	-1.07 0.285
intermediate	.20957		
education level			
Intermediate	.13861	-1.8	-0.70 0.485
education level	.14563		
Above	.02145	-3.3	-1.22 0.224
intermediate	.02682		
education level			
University	.02847	2.0	0.80 0.422
education level	.02475		1.00.0.01-
Post graduate	.00041	1.1	1.00 0.317
education level	0		0.51.0.500
Alexandria	.01898	-0.9	-0.51 0.608
	.02104	0.5	0.00.0.007
Port Said	.00413	-0.5	-0.22 0.827
0	.00454		0.04.0.000
Saez	.0033	-0.4	-0.24 0.808
Demi tt	.00371	2.9	0.00 0.410
Damietta	.06064	-2.8	-0.82 0.410
	.06642		

D 1 11	0.4000	4.5	1 (2 0 104
Dakahlia	.04002	4.5	1.63 0.104
<u></u>	.03135		
Sharkia	.05116	2.1	0.73 0.464
	.04662		
Kalyoubia	.04002	-4.0	-1.47 0.143
	.04868		
Kafr-Elsheikh	.09158	2.1	0.66 0.512
	.08622		
Gharbia	.05363	0.2	0.06 0.949
	.05322		
Menoufia	.00784	-2.1	-0.91 0.364
	.01031		
Behera	.07178	4.3	1.50 0.134
	.06106		
Ismailia	.04455	1.8	0.71 0.477
	.04043		
Giza	.04827	-0.4	-0.13 0.894
	.04909		
Beni-Suef	.08045	-3.8	-1.13 0.257
	.08952		
Fayoum	.07219	4.5	1.38 0.169
2	.06229		
Menia	.06147	5.7	1.89 0.059
	.04909		
Asyout	.06642	0.0	0.00 1.000
5	.06642		
Suhag	.04703	-7.4	-2.40 0.017
0	.06271		
Qena	.05817	-0.7	-0.24 0.807
	.05982		
Aswan	.05281	-4.2	-1.36 0.174
	.06188		
Luxur	.00041	0.0	-0.00 1.000
	.00041		
Female	.53878	0.2	0.09 0.931
	.53754		
Household	199.67	-5.2	-1.79 0.073
Income	221.38		
Household	47616 -	1.0	0.36 0.722
Wealth	.48457	1.0	0.50 0.722
" Calli	1,707,77		

2006	Mean		t tost
Variable		%bias	t-test
variable	Treated	% blas	t p>t
	Control		
Living in a rural	.73345	-2.8	-1.10 0.271
area	.7464		1110 012/1
Reads&writes	.15288	-1.4	-0.59 0.554
(for a father)	.15863	1.1	0.59 0.551
Less than	.05647	1.7	0.89 0.373
intermediate	.05108	1.7	0.07 0.375
(for a father)	.05100		
Intermediate	.00755	-1.7	-1.14 0.256
education level	.01043	-1.7	-1.14 0.230
(for a father)	.01043		
`` /	00072	0.6	0.45.0.655
Above	.00072 .00108	-0.6	-0.45 0.655
intermediate education level	80100		
(for a father)	00288		0.00 1.000
University	.00288	0.0	0.00 1.000
education level	.00288		
(for a father)	11655	1.2	0.50.0.(10
Reads&writes	.11655	-1.3	-0.50 0.619
	.12086		
Less than	.19209	-5.2	-2.03 0.042
intermediate	.21403		
education level	10010		
Intermediate	.18813	-0.3	-0.10 0.918
education level	.18921		
Above	.01439	1.0	0.46 0.644
intermediate	.01295		
education level			
University	.04317	0.2	0.07 0.947
education level	.04281		
Post graduate	.0018	-0.8	-0.30 0.763
education level	.00216		
Alexandria	.01367	0.5	0.35 0.724
	.01259		
Port Said	.0036	1.7	1.00 0.317
	.00216		
Saez	.00468	1.5	0.85 0.393
	.00324		
Damietta	.06583	0.3	0.11 0.914
	.06511		
Dakahlia	.04532	3.3	1.27 0.204
	.03849		
Sharkia	.05144	-2.5	-0.89 0.374
	.05683		

Kalyoubia .04209 0.8 0.34 0.736 Kafr-Elsheikh .09065 0.9 0.28 0.778 Gharbia .0536 -0.7 -0.24 0.813 Menoufia .00612 1.9 1.14 0.256 Behera .06942 -3.3 -1.13 0.258 .07734 .03777 0.82 0.411 Ismailia .04209 1.9 0.82 0.411 .03777 .04353 1.1 0.40 0.690 .04137 .03777 .034 0.738 .1.0 -0.34 0.738 .08705 .0 .040 .0690 .04137 .040 .0690 Beni-Suef .08453 -1.0 -0.34 0.738 .08345 .0 .0 .040 .06367 Subag .04676 -0.5 -0.19 0.850 .04784 .0 .0 .0 .0 .0 Qena .066511 2.6				
Kafr-Elsheikh.09065 .08849 0.9 $0.28 0.778$.028 0.778Gharbia.0536 .05504-0.7 .00396-0.24 0.813 .05504Menoufia.00612 .003961.9 .003961.14 0.256 .00396Behera.06942 .07734-3.3 .07734-1.13 0.258 .07734Ismailia.04209 .041371.9 .040 0.6900.42 0.411 .03777Giza.04353 .041371.1 .040 0.6900.40 0.690 .04137Beni-Suef.08453 .08705-1.0 .04137-0.34 0.738 .04137Fayoum.07338 .08345-4.3 .05468-1.40 0.163 .069 0.487Menia.05899 .054682.0 .069 0.4870.69 0.487 .05468Asyout.07158 .071583.1 .1.17 0.240 .063671.17 0.240 .069 0.487Qena.06511 .058632.6 .007841.00 0.316 .05863Luxur.00036 .1.01.00 0.317 .0Female.52482 .518351.3 .048 0.629 .51835Household412.18 .12.18 .44189 - .0.7-0.25 0.804	Kalyoubia	.04209	0.8	0.34 0.736
.08849 .0.536 .0.7 .0.24 0.813 Gharbia .05504 .0 .0 Menoufia .00612 1.9 1.14 0.256 .00396 .0 .0 .0 Behera .06942 -3.3 -1.13 0.258 .07734 .0 .0 .0 Ismailia .04209 1.9 0.82 0.411 .03777 .0 .0 .0 Giza .04353 1.1 0.40 0.690 .04137 .0 .0.34 0.738 Beni-Suef .08453 -1.0 -0.34 0.738 .08705 .0 .0 .0 Fayoum .07338 -4.3 -1.40 0.163 .08345 .0 .0 .0 Menia .05899 2.0 0.69 0.487 .05468 .0 .0 .0 Qena .06511 2.6 1.00 0.316 .05863 .0 .0 .0 Luxur .00036 1				
Gharbia $.0536$ $.05504$ -0.7 $.024 0.813Menoufia.00612.003961.9.03961.14 0.256.00396Behera.06942.07734-3.3.07734-1.13 0.258.07734Ismailia.04209.037771.9.037770.82 0.411.03777Giza.04353.041371.1.040 0.690.041370.40 0.690.04137Beni-Suef.08453.08705-1.0.034 0.738.08705Fayoum.07338.08705-4.3.08345Menia.05899.054682.0.069 0.487.05468Asyout.07158.047843.1.117 0.240.06367Qena.06511.058632.6.04784Qena.06511.058632.6.019 0.850.04784Luxur.00036.1.01.00 0.316.05863Luxur.00036.1.01.00 0.3170Female.52482.518351.4-0.74 0.459Household412.18427.72-1.4-0.77Household44189-0.7-0.25 0.804$	Kafr-Elsheikh		0.9	0.28 0.778
.05504.006121.91.14 0.256Menoufia.006121.91.14 0.256.00396.00396.3.3-1.13 0.258Behera.06942-3.3-1.13 0.258.07734.042091.90.82 0.411.03777.03777.040 0.690Giza.043531.10.40 0.690.04137.08453-1.0-0.34 0.738Beni-Suef.08453-1.0-0.34 0.738.08705.08705.069 0.487.08845.08705.069 0.487.05468.06367.069 0.487.05468.06367.05468Asyout.071583.11.17 0.240.06367.04784.019 0.850.04784.00036.04784Qena.065112.61.00 0.316.05863.1.01.00 0.317.0.524821.30.48 0.629.51835.51835.1.4-0.74 0.459Household412.18-1.4-0.74 0.459Income427.72.025 0.804		.08849		
Menoufia.00612 .003961.91.140.256Behera.06942 .07734-3.3-1.130.258Ismailia.04209 .042091.90.820.411.03777.03777.0400.690Giza.04353 .041371.10.400.690Beni-Suef.08453 .08705-1.0-0.340.738Fayoum.07338 .08705-4.3-1.400.163Menia.05899 .054682.00.690.487Asyout.07158 .054683.11.170.240Qena.06511 .058632.61.000.316.05863.04784.0.01.000.317Luxur.00036 .047841.01.000.317Female.52482 .518351.30.480.629.51835.1.4-0.740.459Household412.18 427.72-1.4-0.740.459Household44189 0.7-0.250.804	Gharbia		-0.7	-0.24 0.813
0.00396 -3.3 -1.13 0.258 Behera $.06942$ $.07734$ -3.3 -1.13 0.258 Ismailia $.04209$ $.03777$ 1.9 0.82 0.411 Giza $.04353$ $.04137$ 1.1 0.40 0.690 Beni-Suef $.08453$ $.08705$ -1.0 $.03705$ -0.34 0.738 $.08705$ Fayoum $.07338$ $.08705$ -4.3 $.08345$ -1.40 0.163 Menia $.05899$ $.05468$ 2.0 $.05468$ 0.69 0.487 Asyout $.07158$ $.05468$ 3.1 $.07158$ 1.17 0.240 Qena $.04676$ $.05863$ -0.5 $.04784$ -0.19 0.850 Qena $.06511$ $.05863$ 2.6 $.100$ 1.00 0.316 Luxur $.00036$ $.51835$ 1.0 $.048$ 0.629 $.51835$ 1.4 $.0.74$ 0.48 Household 412.18 427.72 -1.4 -0.74 -0.74 0.459 Household 44189 $ -0.7$ -0.25 0.804				
Behera $.06942$ $.07734$ -3.3 -1.13 0.258 Ismailia $.04209$ $.03777$ 1.9 0.82 0.411 Giza $.04353$ $.04137$ 1.1 0.40 0.690 Beni-Suef $.08453$ $.08705$ -1.0 $.08345$ -0.34 0.738 $.08705$ Fayoum $.07338$ $.08705$ -4.3 $.08345$ -1.40 0.163 Menia $.05899$ $.05468$ 2.0 $.069$ 0.69 0.487 $.05468$ Asyout $.07158$ $.05468$ 3.1 $.05468$ 1.17 0.240 Qena $.06511$ $.05863$ 2.6 $.04784$ 1.00 0.316 $.05863$ Qena $.04676$ $.05863$ -5.8 $.2.04$ -2.04 0.041 Luxur $.00036$ $.04784$ 1.0 $.05863$ 1.00 0.317 $.05863$ Household 412.18 412.18 1.04189 -1.4 -0.74 -0.74 0.459 $.025$	Menoufia	.00612	1.9	1.14 0.256
.07734 $.04209$ 1.9 0.82 0.411 Ismailia $.04209$ 1.9 0.82 0.411 Giza $.04353$ 1.1 0.40 0.690 $.04137$ $.04137$ $.040$ 0.690 Beni-Suef $.08453$ -1.0 -0.34 0.738 $.08705$ $.08705$ $.08705$ $.08705$ $.08345$ Fayoum $.07338$ -4.3 -1.40 0.163 $.08345$ $.08345$ $.08345$ $.08345$ $.08345$ Menia $.05899$ 2.0 0.69 0.487 $.05468$ $.05468$ $.06367$ $.019$ 0.850 Asyout $.07158$ 3.1 1.17 0.240 $.06367$ $.04676$ -0.5 -0.19 0.850 $.04784$ $.06511$ 2.6 1.00 0.316 $.05863$ $.0464$ -5.8 -2.04 0.041 $.05863$ $.05863$ $.048$ $.0629$ Luxur $.00036$ 1.0 1.00 0.317 0 $.52482$ 1.3 0.48 0.629 $.51835$ $.1.4$ -0.74 0.459 Household 412.18 -1.4 -0.74 0.459 Income 427.72 $.0.7$ -0.25 0.804		.00396		
Ismailia $.04209$ $.03777$ 1.9 0.82 0.411 Giza $.04353$ $.04137$ 1.1 0.40 0.690 $.04137$ Beni-Suef $.08453$ $.08705$ -1.0 $.08705$ -0.34 0.738 $.08705$ Fayoum $.07338$ $.08705$ -4.3 $.08345$ -1.40 0.163 $.08345$ Menia $.05899$ $.05468$ 2.0 $.05468$ 0.69 0.487 $.05468Asyout.07158.054683.1.063671.170.240.06367Suhag.04676.04784-0.5.04784-0.190.850.04784Qena.06511.058632.6.047841.00.0316Luxur.00036.058631.0.001.00.0317Female.52482.518351.3.0480.48Household412.18412.18-1.4-0.74-0.74Household441890.7-0.250.804$	Behera	.06942	-3.3	-1.13 0.258
.03777 $.04353$ 1.1 0.40 0.690 Giza $.04137$ $.04137$ $.04137$ $.040$ 0.690 Beni-Suef $.08453$ -1.0 -0.34 0.738 $.08705$ $.08705$ $.08705$ $.100$ -0.34 0.738 Fayoum $.07338$ -4.3 -1.40 0.163 $.08345$ $.08345$ $.08345$ $.08345$ $.08345$ Menia $.05899$ 2.0 0.69 0.487 $.05468$ $.05468$ $.0650$ $.04784$ $.06367$ Suhag $.04676$ -0.5 -0.19 0.850 $.04784$ $.06511$ 2.6 1.00 0.316 Qena $.06511$ 2.6 1.00 0.316 $.05863$ $.05863$ $.2.04$ 0.041 $.05863$ $.52482$ 1.3 0.48 0.629 $.51835$ $.1.4$ -0.74 0.459 Household 412.18 -1.4 -0.74 0.459 Household 44189 -0.7 -0.25 0.804		.07734		
Giza $.04353$ $.04137$ 1.1 0.40 0.690 $.04137$ Beni-Suef $.08453$ $.08705$ -1.0 $.08705$ -0.34 0.738 $.08705$ Fayoum $.07338$ $.08705$ -4.3 $.08705$ -1.40 0.163 $.08705$ Menia $.05899$ $.05468$ 2.0 $.05468$ 0.69 0.487 $.05468$ Asyout $.07158$ $.05468$ 3.1 $.05468$ 1.17 0.240 $.06367$ Suhag $.04676$ $.04784$ -0.5 $.04784$ -0.19 0.850 $.04784$ Qena $.06511$ $.05863$ 2.6 $.05863$ 1.00 $.0316$ 0.48 Luxur $.00036$ $.51835$ 1.0 $.51835$ 1.00 $.0.48$ 0.629 $.51835$ Household 412.18 412.18 -1.4 -0.74 0.459 $.0.25$ Household 44189 -0.7 -0.25 0.804	Ismailia	.04209	1.9	0.82 0.411
$\begin{array}{c c c c c c c c c c c c c c c c c c c $.03777		
Beni-Suef.08453 .08705-1.0-0.340.738Fayoum.07338 .08345-4.3-1.400.163Menia.05899 .054682.00.690.487Asyout.07158 .063673.11.170.240Suhag.04676 .04784-0.5-0.190.850Qena.06511 .058632.61.000.316Aswan.0464 .05863-5.8-2.040.041Luxur.00036 .518351.01.000.317Female.52482 .518351.30.480.629Household412.18 427.72 -1.4-0.740.459Household441890.7-0.250.804	Giza	.04353	1.1	0.40 0.690
$\begin{array}{c c c c c c c c c c c c c c c c c c c $.04137		
Fayoum.07338 .08345-4.3-1.400.163Menia.05899 .054682.0 0.69 0.487 Asyout.07158 .063673.1 1.17 0.240 Suhag.04676 .04784-0.5-0.19 0.850 Qena.06511 .058632.6 1.00 0.316 Aswan.0464 .05863-5.8-2.04 0.041 Luxur.00036 .017 1.0 1.00 0.317 Female.52482 .51835 1.3 0.48 0.629 Household 412.18 427.72 -1.4 -0.74 0.459 Household 44189 44189 -0.7 -0.25 0.804	Beni-Suef	.08453	-1.0	-0.34 0.738
.08345 $.08345$ Menia $.05899$ 2.0 0.69 0.487 $.05468$ $.05468$ $.117$ 0.240 Asyout $.07158$ 3.1 1.17 0.240 $.06367$ $.06367$ -0.5 -0.19 0.850 Suhag $.04676$ -0.5 -0.19 0.850 $.04784$ $.06511$ 2.6 1.00 0.316 Qena $.06511$ 2.6 1.00 0.316 $.05863$ $.0464$ -5.8 -2.04 0.041 $.05863$ $.0036$ 1.0 1.00 0.317 Luxur $.00036$ 1.0 1.00 0.317 $.52482$ 1.3 0.48 0.629 $.51835$ $.1.4$ -0.74 0.459 Household 412.18 -1.4 -0.74 Household 44189 -0.77 -0.25		.08705		
Menia.05899 .05468 2.0 0.69 0.487 Asyout.07158 .06367 3.1 1.17 0.240 Suhag.04676 .04784 -0.5 -0.19 0.850 Qena.06511 .05863 2.6 1.00 0.316 Aswan.0464 .05863 -5.8 -2.04 0.041 Luxur.00036 0 1.0 1.00 0.317 Female.52482 .51835 1.3 0.48 0.629 Household 412.18 427.72 -1.4 -0.74 0.459 Household 44189 $ -0.7$ -0.25 0.804	Fayoum	.07338	-4.3	-1.40 0.163
.05468.07158 3.1 $1.17 0.240$ Asyout.07158 3.1 $1.17 0.240$.06367.06367.0Suhag.04676 -0.5 $-0.19 0.850$.04784.04784.0Qena.06511 2.6 $1.00 0.316$.05863.05863.0Aswan.0464 -5.8 $-2.04 0.041$.05863.0.0 $1.00 0.317$ Luxur.00036 1.0 $1.00 0.317$ O.51835Household 412.18 -1.4 $-0.74 0.459$ Income 427.72 Household $44189 -0.7$ $-0.25 0.804$.08345		
Asyout.07158 .06367 3.1 $1.17 0.240$ Suhag.04676 .04784-0.5-0.19 0.850Qena.06511 .05863 2.6 $1.00 0.316$ Aswan.0464 .05863-5.8-2.04 0.041Luxur.00036 .0036 1.0 $1.00 0.317$ Pemale.52482 .51835 1.3 $0.48 0.629$ Household 412.18 427.72 -1.4 $-0.74 0.459$ Household $44189 -0.7$ $-0.25 0.804$	Menia	.05899	2.0	0.69 0.487
.06367 $.06367$ Suhag $.04676$ $.04784$ -0.5 -0.19 0.850 Qena $.06511$ $.05863$ 2.6 1.00 0.316 Aswan $.0464$ $.05863$ -5.8 $.00036$ -2.04 0.041 Luxur $.00036$ 0 1.0 1.00 0.317 Female $.52482$ $.51835$ 1.3 0.48 0.629 Household 412.18 427.72 -1.4 -0.74 -0.74 0.459 Household 44189 $ -0.7$ -0.25 0.804		.05468		
.06367 $.04676$ $.04784$ -0.5 $.04784$ -0.19 0.850 Qena $.06511$ $.05863$ 2.6 $.05863$ 1.00 0.316 Aswan $.0464$ $.05863$ -5.8 $.05863$ -2.04 0.041 Luxur $.00036$ 0 1.0 $.00036$ 1.00 0 Female $.52482$ $.51835$ 1.3 $.0.48$ 0.629 Household 412.18 427.72 -1.4 -0.74 Household 44189 -0.7 -0.25 0.804	Asyout	.07158	3.1	1.17 0.240
$.04784$ $.04784$ Qena $.06511$ 2.6 $1.00 \ 0.316$ $.05863$ $.05863$ $.05863$ $.2.04 \ 0.041$ $.05863$ $.05863$ $.1.0$ $1.00 \ 0.317$ Luxur $.00036$ 1.0 $1.00 \ 0.317$ 0 $.52482$ 1.3 $0.48 \ 0.629$ Female $.52482$ 1.3 $0.48 \ 0.629$ $.51835$ -1.4 $-0.74 \ 0.459$ Income 427.72 -0.7 Household $44189 \ -0.7$	-	.06367		
Qena.06511 .058632.6 $1.00 0.316$ Aswan.0464 .05863-5.8-2.04 0.041.05863.00036 .00036 1.0 $1.00 0.317$ Luxur.00036 .00036 1.0 $1.00 0.317$ Female.52482 .51835 1.3 $0.48 0.629$.51835.048 0.629.51835.048 0.629Household412.18 427.72 -1.4 $-0.74 0.459$ Household $44189 -0.7$ $-0.25 0.804$	Suhag	.04676	-0.5	-0.19 0.850
.05863 .05863 Aswan .0464 -5.8 -2.04 0.041 .05863 .00036 1.0 1.00 0.317 Luxur .00036 1.0 1.00 0.317 O .51835 .048 0.629 .51835 .074 0.459 Income 427.72 .07 Household 44189 - -0.7	-	.04784		
Aswan.0464 .05863 -5.8 -2.04 0.041Luxur.00036 01.01.00 0.317Female.52482 .518351.30.48 0.629Household412.18 427.72 -1.4 -0.74 0.459Household44189 - -0.7 -0.25 0.804	Qena	.06511	2.6	1.00 0.316
.05863 .00036 1.0 1.00 0.317 Luxur .00036 1.0 1.00 0.317 0 0 0 0 Female .52482 1.3 0.48 0.629 .51835 -1.4 -0.74 0.459 Income 427.72 -0.7 -0.25 0.804		.05863		
Luxur .00036 0 1.0 1.00 0.317 Female .52482 1.3 0.48 0.629 .51835 -1.4 -0.74 0.459 Income 427.72 -0.7 -0.25 0.804	Aswan	.0464	-5.8	-2.04 0.041
0 0 Female .52482 1.3 0.48 0.629 .51835 -1.4 -0.74 0.459 Income 427.72 -0.7 -0.25 0.804		.05863		
Female .52482 1.3 0.48 0.629 .51835 .51835 -1.4 -0.74 0.459 Income 427.72 -0.7 -0.25 0.804	Luxur	.00036	1.0	1.00 0.317
.51835 -0.74 0.459 Household 412.18 -1.4 -0.74 0.459 Income 427.72 -0.7 -0.25 0.804		0		
Household412.18 427.72-1.4-0.740.459Income427.72-0.7-0.250.804	Female	.52482	1.3	0.48 0.629
Household412.18 427.72-1.4-0.740.459Income427.72-0.7-0.250.804		.51835		
Income 427.72 Household 44189 - -0.7 -0.25 0.804	Household		-1.4	-0.74 0.459
Household441890.7 -0.25 0.804	Income			
	Household		-0.7	-0.25 0.804
	Wealth			

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		-
Living in a rural	.71597	-5.2	-2.10 0.036
area	.74023		
Reads&writes	.1004	-2.4	-1.10 0.271
(for a father)	.10916		
Less than	.03706	-0.4	-0.27 0.785
intermediate	.03841		
(for a father)			
Intermediate	.0155	0.9	0.54 0.589
education level	.01381		
(for a father)			
Above	.00067	0.0	-0.00 1.000
intermediate	.00067		
education level			
(for a father)			
University	.00101	0.7	1.00 0.317
education level	.00034		
(for a father)			
Reads&writes	.04919	0.3	0.12 0.904
	.04852		
Less than	.19744	-2.5	-1.03 0.302
intermediate	.20822		
education level			
Intermediate	.24057	-2.3	-0.93 0.350
education level	.25101		
Above	.01247	-1.8	-0.89 0.374
intermediate	.01516		
education level			
University	.05391	0.4	0.17 0.863
education level	.0529		
Post graduate	.00202	3.2	1.89 0.059
education level	.00034		
Alexandria	.01415	0.3	0.22 0.824
D	.01348		
Port Said	.00404	2.4	1.42 0.157
	.00202		
Saez	.00404	-0.7	-0.39 0.694
D. 1.11	.00472		
Damietta	.05829	0.5	0.17 0.867
	.05728		

Dakahlia	.04582	1.2	0.44 0.660
Dakamia	.04382	1.2	0.44 0.000
Sharkia		-4.6	-1.71 0.088
Sharkia	.0465	-4.0	-1./1 0.088
TZ 1 1'	.05627	0.0	0.40.0.00
Kalyoubia	.03841	-0.9	-0.40 0.689
	.04043		
Kafr-Elsheikh	.09063	0.3	0.09 0.928
	.08996		
Gharbia	.04919	0.3	0.12 0.904
	.04852		
Menoufia	.00708	0.0	-0.00 1.000
	.00708		
Behera	.06907	2.8	1.05 0.295
	.06233		
Ismailia	.03605	0.8	0.35 0.725
	.03437		
Giza	.03706	-2.1	-0.80 0.422
	.04111		
Beni-Suef	.08625	-0.9	-0.32 0.748
	.08861		
Fayoum	.07244	0.4	0.15 0.880
•	.07143		
Menia	.06233	-0.5	-0.16 0.873
	.06334		
Asyout	.07884	1.5	0.54 0.592
5	.07513		
Suhag	.05559	-3.1	-1.10 0.271
0	.06233		
Qena	.06435	1.6	0.64 0.519
X	.06031		
Aswan	.05627	2.0	0.75 0.456
1 10 11 411	.05189	2.0	
Luxur	.00067	0.0	0.00 1.000
	.00067		0.00 1.000
Female	.51988	0.3	0.13 0.897
I UIIIIU	.51900	0.5	0.15 0.077
Household	887.02	-1.3	-0.50 0.617
Income	921.27	-1.5	-0.50 0.017
Household	43018 -	-6.6	-2.65 0.008
	.37851	-0.0	-2.03 0.008
Wealth	.3/031		

	Mean		t-test	V(T)/	
Variable	Treated Control	%bias	t p>t	V(C)	
Living in a rural	.72051	-1.4	-0.54 0.588		
area	.72704				
Reads&writes	.08457	-1.9	-0.86 0.392		
(for a father)	.09111				
Less than	.03303	0.3	0.15 0.880		
intermediate	.0323				
(for a father)					
Intermediate	.01996	1.7	1.12 0.265		
education level	.01597				
(for a father)					
Above	.00218	-0.5	-0.28 0.781	•	
intermediate	.00254				
education level					
(for a father)					
University	.00218	-0.5	-0.54 0.593		
education level	.0029				
(for a father)					
Reads&writes	.07187	3.5	1.29 0.198		
	.06316				
Less than	.12341	-3.3	-1.25 0.213		
intermediate	.13466				
education level					
Intermediate	.27804	1.0	0.39 0.695		
education level	.27332				
Above	.01633	-1.8	-0.82 0.415		
intermediate	.01924				
education level					
University	.05517	0.0	-0.00 1.000	•	
education level	.05517				
Post graduate	.00327	0.0	0.00 1.000	•	
education level	.00327				
Alexandria	.01162	0.9	0.65 0.513	•	
	.0098				
Port Said	.00363	-0.9	-0.43 0.669	•	
	.00436				

Saez	.00472	1.1	0.63 0.531		
Buez	.00363	1.1	0.05 0.551	•	
Damietta	.06062	1.4	0.46 0.648		
2	.05771				
Dakahlia	.03702	-0.7	-0.28 0.777		
	.03848			-	
Sharkia	.05082	-2.6	-0.90 0.369		
	.05626				
Kalyoubia	.03884	-1.6	-0.62 0.538		
5	.04211				
Kafr-Elsheikh	.08893	0.1	0.05 0.962		
	.08857				
Gharbia	.04537	1.2	0.46 0.646		
	.04283				
Menoufia	.00508	1.0	0.60 0.548		
	.00399				
Behera	.08494	-1.3	-0.43 0.666		
	.0882				
Ismailia	.0363	-1.6	-0.70 0.482		
	.03993				
Giza	.04283	-5.1	-1.71 0.088		
	.05263				
Beni-Suef	.08312	-1.2	-0.39 0.699		
	.08603				
Fayoum	.07877	2.7	0.87 0.387		
-	.0726				
Menia	.06534	-1.4	-0.48 0.628		
	.0686				
Asyout	.08203	1.9	0.65 0.518		
	.07731				
Suhag	.05045	-1.2	-0.43 0.670		
	.05299				
Qena	.05372	0.9	0.36 0.717		
	.05154				
Aswan	.05263	4.0	1.51 0.132		
	.04392				
Luxur	.00109	0.7	0.45 0.655		
	.00073				
Female	.53285	0.7	0.27 0.787		
	.52922				
Household	1888.1	-1.0	-0.40 0.691	1.57*	
Income	1959.3				
Household	36785 -	-1.6	-0.72 0.470	0.98	
Wealth	.35466				

IV. Becoming a White Collar Worker for the offsprings whose father is an agricultural father relative to a white-collar father

	Mean		t-test	V(T)/
Variable	Treated	%bias	t p>t	V(C)
, and to	Control	, 0 0 1 u b	· ···	(0)
	Control			
Living in a rural	.7038	-0.3	-0.09 0.925	
area	.70503			
Reads&writes	.17987	-3.4	-1.25 0.210	
(for a father)	.19389			
Less than	.04208	0.5	0.22 0.829	
intermediate	.04084			
(for a father)				
Intermediate	.00866	0.5	0.65 0.515	
education level	.00701			
(for a father)				
Above	.00041	0.3	1.00 0.317	
intermediate	0			
education level	-			
(for a father)				
University	.00165	0.0	-0.00 1.000	1.
education level	.00165	0.0	0.000 1.000	
(for a father)				
Reads&writes	0 0			_
Less than	.14645	-20.5	-6.67 0.000	
intermediate	.2203	20.0		•
education level				
Intermediate	.19719	-1.4	-0.54 0.590	
education level	.20338			
Above	.13861	6.2	2.55 0.011	
intermediate	.11427			
education level				
University	.02145	2.3	1.04 0.298	
education level	.01733			
Post graduate	.02847	-0.8	-0.42 0.671	
education level	.03053			
Alexandria	.01898	3.3	1.85 0.064	
	.01238			
Port Said	.00413	-1.8	-0.82 0.413	
	.00578			
Saez	.0033	1.2	0.83 0.405	
	.00206			
Damietta	.06064	-7.0	-2.05 0.040	
	.0755			
Dakahlia	.04002	2.3	0.91 0.365	
	.03507			
Sharkia	.05116	7.5	2.76 0.006	
	.03507			
Kalyoubia	.04002	-5.3	-1.73 0.084	
J	.05033	-		1

Kafr-Elsheikh	.09158	2.0	0.60 0.545	
Kull Elisheikh	.08663	2.0	0.00 0.5 15	•
Gharbia	.05363	-3.5	-1.17 0.241	
Gharola	.06147	5.5	1.17 0.211	•
Menoufia	.00784	-1.8	-0.77 0.444	
Menouna	.0099	1.0	0.77 0.111	•
Behera	.07178	12.6	4.82 0.000	
Denera	.04002	12.0	1102 01000	•
Ismailia	.04455	-6.3	-2.15 0.032	
	.05817	0.0		
Giza	.04827	-27.1	-6.93 0.000	
	.10025			
Beni-Suef	.08045	-2.0	-0.62 0.532	
	.0854			
Fayoum	.07219	8.7	2.85 0.004	
5	.05239			
Menia	.06147	-4.2	-1.38 0.166	
	.07137			
Asyout	.06642	9.3	3.40 0.001	
	.04414			
Suhag	.04703	-0.8	-0.27 0.788	
-	.04868			
Qena	.05817	-2.9	-0.90 0.369	
	.06436			
Aswan	.05281	4.9	1.83 0.068	
	.04167			
Luxur	.00041	0.6	1.00 0.317	
	0			
Female	.53878	2.4	0.83 0.404	
	.52682			
Household	199.67	-6.5	-2.90 0.004	0.70*
Income	235.29			
Household	47616 -	-2.3	-0.80 0.426	1.00
Wealth	.45761			

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		_
Living in a rural	.73345	-0.2	-0.06 0.952
area	.73417		
Reads&writes	.15288	1.1	0.41 0.680
(for a father)	.14892		
Less than	.05647	3.4	1.70 0.089
intermediate	.0464		
(for a father)			

	00		
Intermediate	.00755	0.4	0.65 0.515
education level	.00612		
(for a father)			
Above	.00072	-0.4	-0.82 0.414
intermediate	.00144		
education level			
(for a father)			
University	.00288	-1.0	-1.46 0.144
education level	.0054		
(for a father)			
Reads&writes	.11655	-5.9	-2.26 0.024
ReadS& willes	.13669	5.7	2.20 0.021
Less than	.19209	-1.8	-0.71 0.478
intermediate	.19209	-1.0	-0.71 0.478
	.19904		
education level	10012	2.4	1.20.0.164
Intermediate	.18813	3.4	1.39 0.164
education level	.17374		
Above	.01439	-2.4	-1.16 0.245
intermediate	.01835		
education level			
University	.04317	1.1	0.60 0.545
education level	.03993		
Post graduate	.0018	1.2	0.71 0.479
education level	.00108		
Alexandria	.01367	-1.5	-0.88 0.379
	.01655		
Port Said	.0036	2.1	1.29 0.196
	.0018		
Saez	.00468	0.0	-0.00 1.000
Bucz	.00468	0.0	0.00 1.000
Damietta	.06583	-7.9	-2.36 0.019
Damietta	.08237	-7.5	-2.50 0.017
Dakahlia	.08237	0.0	-0.32 0.750
Dakainia		-0.9	-0.32 0.730
Charle's	.04712	2.2	
Sharkia	.05144	3.3	1.26 0.209
17 1 1	.04424		1 51 0 005
Kalyoubia	.04209	-5.0	-1.71 0.087
	.0518		
Kafr-Elsheikh	.09065	-9.5	-2.96 0.003
	.11475		
Gharbia	.0536	-9.2	-3.08 0.002
	.07374		
Menoufia	.00612	-2.3	-1.10 0.273
	.00863		
Behera	.06942	7.6	3.00 0.003
	.05036		
Ismailia	.04209	8.3	3.84 0.000
	.02374	0.0	
	···		

Giza	.04353	3.8	1.37 0.171
UIZa		5.0	1.57 0.171
	.03633		
Beni-Suef	.08453	16.3	6.01 0.000
	.04496		
Fayoum	.07338	-3.2	-1.01 0.314
	.08058		
Menia	.05899	2.9	1.11 0.266
	.05216		
Asyout	.07158	5.3	1.90 0.057
	.05899		
Suhag	.04676	-11.3	-3.98 0.000
	.07194		
Qena	.06511	5.0	1.76 0.079
	.05396		
Aswan	.0464	-5.6	-2.21 0.027
	.05971		
Luxur	.00036	-1.1	-1.00 0.317
	.00108		
Female	.52482	-7.8	-2.91 0.004
	.56367		
Household	412.18	-3.9	-1.44 0.150
Income	449.28		
Household	44189 -	-3.5	-1.31 0.192
Wealth	.41315		

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		
Living in a rural	.71597	4.2	1.62 0.104
area	.69677		
Reads&writes	.1004	-4.1	-1.64 0.102
(for a father)	.11354		
Less than	.03706	3.0	1.82 0.069
intermediate	.02864		
(for a father)			
Intermediate	.0155	0.1	0.11 0.916
education level	.01516		
(for a father)			
Above	.00067	-0.6	-1.13 0.257
intermediate	.00168		
education level			
(for a father)			

University	.00101	-0.1	-0.38 0.705
education level	.00135		
(for a father)			
Reads&writes	.04919	-5.8	-1.88 0.060
	.06031		
Less than	.19744	-3.9	-1.57 0.116
intermediate	.21395		
education level			
Intermediate	.24057	5.5	2.26 0.024
education level	.21597		
Above	.01247	0.0	0.00 1.000
intermediate	.01247		
education level			
University	.05391	3.3	2.00 0.046
education level	.04279		
Post graduate	.00202	0.0	-0.00 1.000
education level	.00202		
Alexandria	.01415	-1.0	-0.64 0.524
	.01617		
Port Said	.00404	-3.3	-1.42 0.156
	.00674		
Saez	.00404	0.9	0.66 0.512
~~~	.00303	0.7	0.000 0.012
Damietta	.05829	-4.7	-1.50 0.135
Dumettu	.06772	,	1.50 0.155
Dakahlia	.04582	7.1	3.05 0.002
Dukumu	.03066	/.1	5.05 0.002
Sharkia	.0465	-0.2	-0.06 0.951
Sharkia	.04683	0.2	0.00 0.951
Kalyoubia	.03841	2.5	0.97 0.330
ixuiyouolu	.03369	2.5	0.97 0.330
Kafr-Elsheikh	.09063	11.2	4.16 0.000
	.06199	11.2	1.10 0.000
Gharbia	.04919	-3.2	-1.16 0.245
Gharola	.05593	5.2	1.10 0.245
Menoufia	.00708	-4.7	-2.11 0.035
Wienouna	.01247	-4.7	-2.11 0.033
Behera	.06907	12.1	5.05 0.000
Denera	.03942	12.1	5.05 0.000
Ismailia	.03605	-8.8	-3.60 0.000
Isilialila	.05559	-0.0	-3.00 0.000
Giza		-2.6	-0.93 0.350
Giza	.03706	-2.0	-0.95 0.550
Deni Curf	.04178	67	
Beni-Suef	.08625	6.7	2.32 0.020
	.07008		
Fayoum	.07244	-6.4	-2.06 0.039
	.08693		
Menia	.06233	2.1	0.82 0.412
	.05728		

Asyout	.07884	-8.1	-2.69 0.007
	.09872		
Suhag	.05559	7.7	3.20 0.001
	.03807		
Qena	.06435	-4.4	-1.53 0.126
	.07446		
Aswan	.05627	-8.2	-3.03 0.002
	.07581		
Luxur	.00067	0.0	0.00 1.000
	.00067		
Female	.51988	1.1	0.42 0.678
	.51449		
Household	887.02	-0.3	-0.14 0.890
Income	896.83		
Household	43018 -	8.0	3.33 0.001
Wealth	.49788		

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		
Living in a rural	.72051	-5.3	-2.04 0.041
area	.74483		
Reads&writes	.08457	0.7	0.29 0.770
(for a father)	.0824		
Less than	.03303	-0.4	-0.22 0.823
intermediate	.03412		
(for a father)			
Intermediate	.01996	0.6	0.49 0.622
education level	.01815		
(for a father)			
Above	.00218	0.5	0.63 0.527
intermediate	.00145		
education level			
(for a father)			
University	.00218	-0.3	-0.54 0.593
education level	.0029		
(for a father)			
Reads&writes	.07187	1.3	0.42 0.674
	.06897		
Less than	.12341	-4.0	-1.36 0.173
intermediate	.13575		
education level			
Intermediate	.27804	-2.6	-1.02 0.310
education level	.29038		

Above	.01633	-1.3	-0.62 0.537
intermediate	.01851		
education level			
University	.05517	2.6	1.60 0.110
education level	.04574		
Post graduate	.00327	1.0	0.78 0.438
education level	.00218		
Alexandria	.01162	1.3	0.93 0.351
	.00907		
Port Said	.00363	0.4	0.23 0.818
	.00327		
Saez	.00472	-0.7	-0.38 0.705
	.00544		
Damietta	.06062	-0.2	-0.06 0.955
	.06098		
Dakahlia	.03702	-7.9	-2.86 0.004
	.05299		
Sharkia	.05082	3.3	1.27 0.204
	.04356		
Kalyoubia	.03884	2.9	1.16 0.247
	.03303		
Kafr-Elsheikh	.08893	0.4	0.14 0.887
	.08784		
Gharbia	.04537	3.0	1.14 0.255
0	.0392	210	
Menoufia	.00508	1.3	0.82 0.413
in the unit	.00363	110	0.02 0.112
Behera	.08494	-1.5	-0.48 0.632
Demera	.08857	1.0	0.10 0.002
Ismailia	.0363	-4.5	-1.83 0.067
Isinaina	.0461	1.5	1.05 0.007
Giza	.04283	-5.4	-1.89 0.059
OILU	.05372	5.1	1.09 0.009
Beni-Suef	.08312	9.5	3.35 0.001
Dem Suer	.05989	2.5	5.55 0.001
Fayoum	.07877	3.2	1.02 0.307
1 dyouin	.07151	5.2	1.02 0.307
Menia	.06534	-5.2	-1.78 0.075
Wiema	.07768	5.2	1.70 0.075
Asyout	.08203	-0.9	-0.29 0.770
1359000	.08203	0.7	0.27 0.770
Suhag	.05045	-5.9	-2.15 0.032
Sunag	.06388	-5.7	-2.13 0.032
Oena	.05372	5.9	2.15 0.031
Qena	.03372	5.7	2.15 0.051
Aswan	.05263	0.6	0.24 0.808
ASWall		0.0	0.24 0.808
I uvue	.05118	0.8	0.45.0.655
Luxur	.00109	0.8	0.45 0.655
	.00073		

Female	.53285	7.4	2.75 0.006
	.49583		
Household	1888.1	-0.3	-0.10 0.924
Income	1906.6		
Household	36785 -	0.2	0.09 0.929
Wealth	.36944		

V. Becoming an Agricultural Worker for the offsprings whose father is an agricultural father relative to a blue-collar father

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		
Living in a rural	.7038	-1.8	-0.66 0.507
area	.71246		
Reads&writes	.17987	-1.7	-0.67 0.504
(for a father)	.18729		
Less than	.04208	3.0	1.58 0.114
intermediate	.03342		
(for a father)			
Intermediate	.00866	1.7	1.00 0.316
education level	.00619		
(for a father)			
Above	.00041	-1.7	-1.00 0.317
intermediate	.00124		
education level			
(for a father)			

	001.57		
University	.00165	1.6	0.82 0.414
education level	.00083		
(for a father)			
Reads&writes	.14645	6.6	2.44 0.015
	.12252		
Less than	.19719	-2.9	-1.07 0.285
intermediate	.20957		
education level			
Intermediate	.13861	-1.8	-0.70 0.485
education level	.14563		
Above	.02145	-3.3	-1.22 0.224
intermediate	.02682		
education level			
University	.02847	2.0	0.80 0.422
education level	.02475		
Post graduate	.00041	1.1	1.00 0.317
education level	0		
Alexandria	.01898	-0.9	-0.51 0.608
	.02104		
Port Said	.00413	-0.5	-0.22 0.827
1 oft Suid	.00454	0.0	0.22 0.02/
Saez	.0033	-0.4	-0.24 0.808
Sucz	.0035	0.4	0.24 0.000
Damietta	.06064	-2.8	-0.82 0.410
Dannetta	.06642	-2.0	-0.02 0.410
Dakahlia	.04002	4.5	1.63 0.104
Dakailila	.04002	4.5	1.05 0.104
Sharkia	.05135	2.1	0.73 0.464
Sharkia	.04662	2.1	0.75 0.404
Kalwawhia		-4.0	1 47 0 142
Kalyoubia	.04002	-4.0	-1.47 0.143
K - f - F1-1 - 11-1	.04868	2.1	0.66.0.512
Kafr-Elsheikh	.09158	2.1	0.66 0.512
	.08622	0.2	
Gharbia	.05363	0.2	0.06 0.949
	.05322	2.1	0.01.0.264
Menoufia	.00784	-2.1	-0.91 0.364
<b>D</b> 1	.01031		1.50.0.101
Behera	.07178	4.3	1.50 0.134
	.06106		
Ismailia	.04455	1.8	0.71 0.477
	.04043		
Giza	.04827	-0.4	-0.13 0.894
	.04909		
Beni-Suef	.08045	-3.8	-1.13 0.257
	.08952		
Fayoum	.07219	4.5	1.38 0.169
	.06229		
Menia	.06147	5.7	1.89 0.059
	.04909		
	1	<b>I</b>	L

Asyout	.06642	0.0	0.00 1.000
	.06642		
Suhag	.04703	-7.4	-2.40 0.017
	.06271		
Qena	.05817	-0.7	-0.24 0.807
	.05982		
Aswan	.05281	-4.2	-1.36 0.174
	.06188		
Luxur	.00041	0.0	-0.00 1.000
	.00041		
Female	.53878	0.2	0.09 0.931
	.53754		
Household	199.67	-5.2	-1.79 0.073
Income	221.38		
Household	47616 -	1.0	0.36 0.722
Wealth	.48457		

	Mean		t-test	V(T)/
Variable	Treated	%bias	t p>t	V(C)
	Control		_	
Living in a rural	.73345	-2.8	-1.10 0.271	
area	.7464			
Reads&writes	.15288	-1.4	-0.59 0.554	
(for a father)	.15863			
Less than	.05647	1.7	0.89 0.373	
intermediate	.05108			
(for a father)				
Intermediate	.00755	-1.7	-1.14 0.256	
education level	.01043			
(for a father)				
Above	.00072	-0.6	-0.45 0.655	
intermediate	.00108			
education level				
(for a father)				
University	.00288	0.0	0.00 1.000	
education level	.00288			
(for a father)				
Reads&writes	.11655	-1.3	-0.50 0.619	
	.12086			

Less than	.19209	-5.2	-2.03 0.042	•
intermediate	.21403			
education level				
Intermediate	.18813	-0.3	-0.10 0.918	
education level	.18921			
Above	.01439	1.0	0.46 0.644	•
intermediate	.01295			
education level				
University	.04317	0.2	0.07 0.947	
education level	.04281	0.2		
Post graduate	.0018	-0.8	-0.30 0.763	
education level	.00216	-0.0	-0.30 0.703	•
Alexandria	.01367	0.5	0.35 0.724	
Alexaliul la	.01307	0.5	0.55 0.724	•
		1 7	1.00.0.217	
Port Said	.0036	1.7	1.00 0.317	•
	.00216	1 -		
Saez	.00468	1.5	0.85 0.393	•
	.00324			
Damietta	.06583	0.3	0.11 0.914	
	.06511			
Dakahlia	.04532	3.3	1.27 0.204	
	.03849			
Sharkia	.05144	-2.5	-0.89 0.374	
	.05683			
Kalyoubia	.04209	0.8	0.34 0.736	
j - a - a	.04029			
Kafr-Elsheikh	.09065	0.9	0.28 0.778	
	.08849	0.5	0.20 0.770	•
Gharbia	.0536	-0.7	-0.24 0.813	
Onurona	.05504	0.7	0.21 0.015	•
Menoufia	.00612	1.9	1.14 0.256	
wichouna	.00396	1.7	1.14 0.230	•
Behera	.06942	-3.3	-1.13 0.258	
Dellera		-3.3	-1.15 0.238	•
Taura 11'	.07734	1.0		
Ismailia	.04209	1.9	0.82 0.411	•
	.03777			
Giza	.04353	1.1	0.40 0.690	•
	.04137			
Beni-Suef	.08453	-1.0	-0.34 0.738	
	.08705			
Fayoum	.07338	-4.3	-1.40 0.163	
	.08345			
Menia	.05899	2.0	0.69 0.487	
	.05468			
Asyout	.07158	3.1	1.17 0.240	_
110,000	.06367	5.1	1.17 0.210	
Suhag	.04676	-0.5	-0.19 0.850	
Junag	.04070	-0.5	-0.17 0.030	
	.04/04			

Qena	.06511	2.6	1.00 0.316	
	.05863			
Aswan	.0464	-5.8	-2.04 0.041	
	.05863			
Luxur	.00036	1.0	1.00 0.317	
	0			
Female	.52482	1.3	0.48 0.629	
	.51835			
Household	412.18	-1.4	-0.74 0.459	0.97
Income	427.72			
Household	44189 -	-0.7	-0.25 0.804	0.95
Wealth	.43651			

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		r r
Living in a rural	.71597	-5.2	-2.10 0.036
area	.74023		
Reads&writes	.1004	-2.4	-1.10 0.271
(for a father)	.10916		
Less than	.03706	-0.4	-0.27 0.785
intermediate	.03841		
(for a father)			
Intermediate	.0155	0.9	0.54 0.589
education level	.01381		
(for a father)			
Above	.00067	0.0	-0.00 1.000
intermediate	.00067		
education level			
(for a father)			
University	.00101	0.7	1.00 0.317
education level	.00034		
(for a father)			
Reads&writes	.04919	0.3	0.12 0.904
	.04852		
Less than	.19744	-2.5	-1.03 0.302
intermediate	.20822		
education level			
Intermediate	.24057	-2.3	-0.93 0.350
education level	.25101		
Above	.01247	-1.8	-0.89 0.374
intermediate	.01516		
education level			
University	.05391	0.4	0.17 0.863
education level	.0529		

	00000		1.00.0.070
Post graduate	.00202	3.2	1.89 0.059
education level	.00034		
Alexandria	.01415	0.3	0.22 0.824
	.01348		
Port Said	.00404	2.4	1.42 0.157
	.00202		
Saez	.00404	-0.7	-0.39 0.694
	.00472		
Damietta	.05829	0.5	0.17 0.867
	.05728		
Dakahlia	.04582	1.2	0.44 0.660
Dunumu	.04346	1.2	
Sharkia	.0465	-4.6	-1.71 0.088
Sharkia	.05627	-4.0	-1.71 0.000
Kalyoubia	.03841	-0.9	-0.40 0.689
Kalyoubla		-0.9	-0.40 0.089
	.04043	0.2	0.00.0.020
Kafr-Elsheikh	.09063	0.3	0.09 0.928
	.08996		0.10.0001
Gharbia	.04919	0.3	0.12 0.904
	.04852		
Menoufia	.00708	0.0	-0.00 1.000
	.00708		
Behera	.06907	2.8	1.05 0.295
	.06233		
Ismailia	.03605	0.8	0.35 0.725
	.03437		
Giza	.03706	-2.1	-0.80 0.422
	.04111		
Beni-Suef	.08625	-0.9	-0.32 0.748
	.08861	0.5	0.02 0.710
Fayoum	.07244	0.4	0.15 0.880
1 ayoum	.07143	0.4	0.15 0.000
Menia	.06233	-0.5	-0.16 0.873
Ivicilla	.06334	-0.5	-0.10 0.875
A		1.5	0.54.0.502
Asyout	.07884	1.5	0.54 0.592
0.1	.07513	- 2.1	1 10 0 071
Suhag	.05559	-3.1	-1.10 0.271
	.06233		
Qena	.06435	1.6	0.64 0.519
	.06031		
Aswan	.05627	2.0	0.75 0.456
	.05189		
Luxur	.00067	0.0	0.00 1.000
	.00067		
Female	.51988	0.3	0.13 0.897
	.51819		
Household	887.02	-1.3	-0.50 0.617
Income	921.27		
	/ - 1 . 4 /		1

Household	43018 -	-6.6	-2.65 0.008
Wealth	.37851		

	Mean		t-test
Variable	Treated	%bias	t p>t
, unuone	Control	, o o rub	· p· ·
	2011101		
Living in a rural	.72051	-1.4	-0.54 0.588
area	.72704		
Reads&writes	.08457	-1.9	-0.86 0.392
(for a father)	.09111		0.00 0.072
Less than	.03303	0.3	0.15 0.880
intermediate	.0323	0.0	0.12 0.000
(for a father)			
Intermediate	.01996	1.7	1.12 0.265
education level	.01597		
(for a father)			
Above	.00218	-0.5	-0.28 0.781
intermediate	.00254		
education level			
(for a father)			
University	.00218	-0.5	-0.54 0.593
education level	.0029		
(for a father)			
Reads&writes	.07187	3.5	1.29 0.198
	.06316		
Less than	.12341	-3.3	-1.25 0.213
intermediate	.13466		
education level			
Intermediate	.27804	1.0	0.39 0.695
education level	.27332		
Above	.01633	-1.8	-0.82 0.415
intermediate	.01924		
education level			
University	.05517	0.0	-0.00 1.000
education level	.05517		
Post graduate	.00327	0.0	0.00 1.000
education level	.00327		
Alexandria	.01162	0.9	0.65 0.513
	.0098		
Port Said	.00363	-0.9	-0.43 0.669
	.00436		
Saez	.00472	1.1	0.63 0.531
<b>D</b>	.00363		
Damietta	.06062	1.4	0.46 0.648
	.05771		

<b>D</b> 1 11	00700	0.7	0.00.0.555
Dakahlia	.03702	-0.7	-0.28 0.777
	.03848		
Sharkia	.05082	-2.6	-0.90 0.369
	.05626		
Kalyoubia	.03884	-1.6	-0.62 0.538
	.04211		
Kafr-Elsheikh	.08893	0.1	0.05 0.962
	.08857		
Gharbia	.04537	1.2	0.46 0.646
	.04283		
Menoufia	.00508	1.0	0.60 0.548
	.00399		
Behera	.08494	-1.3	-0.43 0.666
	.0882		
Ismailia	.0363	-1.6	-0.70 0.482
	.03993		
Giza	.04283	-5.1	-1.71 0.088
	.05263		
Beni-Suef	.08312	-1.2	-0.39 0.699
	.08603		
Fayoum	.07877	2.7	0.87 0.387
-	.0726		
Menia	.06534	-1.4	-0.48 0.628
	.0686		
Asyout	.08203	1.9	0.65 0.518
5	.07731		
Suhag	.05045	-1.2	-0.43 0.670
U	.05299		
Qena	.05372	0.9	0.36 0.717
	.05154		
Aswan	.05263	4.0	1.51 0.132
	.04392		
Luxur	.00109	0.7	0.45 0.655
	.00073		
Female	.53285	0.7	0.27 0.787
	.52922		
Household	1888.1	-1.0	-0.40 0.691
Income	1959.3		
Household	36785 -	-1.6	-0.72 0.470
Wealth	.35466		
	.22.30		

VI. Becoming an Agricultural Worker for the offsprings whose father is an agricultural father relative to a white-collar father

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		1
Living in a rural	.7038	-0.3	-0.09 0.925
area	.70503		
Reads&writes	.17987	-3.4	-1.25 0.210
(for a father)	.19389		
Less than	.04208	0.5	0.22 0.829
intermediate	.04084		
(for a father)			
Intermediate	.00866	0.5	0.65 0.515
education level	.00701		
(for a father)			
Above	.00041	0.3	1.00 0.317
intermediate	0		
education level	-		
(for a father)			
University	.00165	0.0	-0.00 1.000
education level	.00165		
(for a father)			
Reads&writes	.14645	-20.5	-6.67 0.000
	.2203		
Less than	.19719	-1.4	-0.54 0.590
intermediate	.20338		
education level			
Intermediate	.13861	6.2	2.55 0.011
education level	.11427		
Above	.02145	2.3	1.04 0.298
intermediate	.01733		
education level			
University	.02847	-0.8	-0.42 0.671
education level	.03053		
Post graduate	.00041	0.8	1.00 0.317
education level	0		
Alexandria	.01898	3.3	1.85 0.064
	.01238		
Port Said	.00413	-1.8	-0.82 0.413
	.00578		
Saez	.0033	1.2	0.83 0.405
	.00206		
Damietta	.06064	-7.0	-2.05 0.040
	.0755	-	
Dakahlia	.04002	2.3	0.91 0.365
	.03507		
Sharkia	.05116	7.5	2.76 0.006
	.03507		
Kalyoubia	.04002	-5.3	-1.73 0.084
	.05033	2.2	1.75 0.001
	.000000		

Kafr-Elsheikh	.09158	2.0	0.60 0.545
	.08663		
Gharbia	.05363	-3.5	-1.17 0.241
	.06147		
Menoufia	.00784	-1.8	-0.77 0.444
	.0099		
Behera	.07178	12.6	4.82 0.000
	.04002		
Ismailia	.04455	-6.3	-2.15 0.032
	.05817		
Giza	.04827	-27.1	-6.93 0.000
	.10025		
Beni-Suef	.08045	-2.0	-0.62 0.532
	.0854		
Fayoum	.07219	8.7	2.85 0.004
	.05239		
Menia	.06147	-4.2	-1.38 0.166
	.07137		
Asyout	.06642	9.3	3.40 0.001
	.04414		
Suhag	.04703	-0.8	-0.27 0.788
	.04868		
Qena	.05817	-2.9	-0.90 0.369
	.06436		
Aswan	.05281	4.9	1.83 0.068
	.04167		
Luxur	.00041	0.6	1.00 0.317
	0		
Female	.53878	2.4	0.83 0.404
	.52682		
Household	199.67	-6.5	-2.90 0.004
Income	235.29		
Household	47616 -	-2.3	-0.80 0.426
Wealth	.45761		

	Mean		t-test
Variable	Treated	%bias	t p>t
	Control		_
Living in a rural	.73345	-0.2	-0.06 0.952
area	.73417		
Reads&writes	.15288	1.1	0.41 0.680
(for a father)	.14892		
Less than	.05647	3.4	1.70 0.089
intermediate	.0464		
(for a father)			

~	00		
Intermediate	.00755	0.4	0.65 0.515
education level	.00612		
(for a father)			
Above	.00072	-0.4	-0.82 0.414
intermediate	.00144		
education level			
(for a father)			
University	.00288	-1.0	-1.46 0.144
education level	.0054		
(for a father)			
Reads&writes	.11655	-5.9	-2.26 0.024
Reduber willes	.13669	5.7	2.20 0.021
Less than	.19209	-1.8	-0.71 0.478
intermediate		-1.0	-0.71 0.478
	.19964		
education level	10012	2.4	1 20 0 1 64
Intermediate	.18813	3.4	1.39 0.164
education level	.17374		
Above	.01439	-2.4	-1.16 0.245
intermediate	.01835		
education level			
University	.04317	1.1	0.60 0.545
education level	.03993		
Post graduate	.0018	1.2	0.71 0.479
education level	.00108		
Alexandria	.01367	-1.5	-0.88 0.379
	.01655		
Port Said	.0036	2.1	1.29 0.196
i on Suid	.0018	2.1	1.29 0.190
Saez	.00468	0.0	-0.00 1.000
Sucz	.00468	0.0	0.00 1.000
Damietta	.06583	-7.9	-2.36 0.019
Damietta		-7.9	-2.30 0.019
Delvelation	.08237	0.0	0.22.0.750
Dakahlia	.04532	-0.9	-0.32 0.750
<u> </u>	.04712		1.00.0000
Sharkia	.05144	3.3	1.26 0.209
	.04424		
Kalyoubia	.04209	-5.0	-1.71 0.087
	.0518		
Kafr-Elsheikh	.09065	-9.5	-2.96 0.003
	.11475		
Gharbia	.0536	-9.2	-3.08 0.002
	.07374		
Menoufia	.00612	-2.3	-1.10 0.273
	.00863		
Behera	.06942	7.6	3.00 0.003
Bellera	.05036	7.0	5.00 0.005
Ismailia	.04209	8.3	3.84 0.000
1511141114	.04209	0.3	3.04 0.000
	.02374		

Giza	.04353	3.8	1.37 0.171
	.03633		
Beni-Suef	.08453	16.3	6.01 0.000
	.04496		
Fayoum	.07338	-3.2	-1.01 0.314
	.08058		
Menia	.05899	2.9	1.11 0.266
	.05216		
Asyout	.07158	5.3	1.90 0.057
	.05899		
Suhag	.04676	-11.3	-3.98 0.000
	.07194		
Qena	.06511	5.0	1.76 0.079
	.05396		
Aswan	.0464	-5.6	-2.21 0.027
	.05971		
Luxur	.00036	-1.1	-1.00 0.317
	.00108		
Female	.52482	-7.8	-2.91 0.004
	.56367		
Household	412.18	-3.9	-1.44 0.150
Income	449.28		
Household	44189 -	-3.5	-1.31 0.192
Wealth	.41315		

## 

	Mean		t tost
			t-test
Variable	Treated	%bias	t p>t
	Control		
Living in a rural	.71597	4.2	1.62 0.104
area	.69677		
Reads&writes	.1004	-4.1	-1.64 0.102
(for a father)	.11354		
Less than	.03706	3.0	1.82 0.069
intermediate	.02864		
(for a father)			
Intermediate	.0155	0.1	0.11 0.916
education level	.01516		
(for a father)			
Above	.00067	-0.6	-1.13 0.257
intermediate	.00168		
education level			
(for a father)			
University	.00101	-0.1	-0.38 0.705
education level	.00135		
(for a father)			

D 10 '	0.4010	50	1.00.0.000
Reads&writes	.04919	-5.8	-1.88 0.060
	.06031		
Less than	.19744	-3.9	-1.57 0.116
intermediate	.21395		
education level			
Intermediate	.24057	5.5	2.26 0.024
education level	.21597		
Above	.01247	0.0	0.00 1.000
intermediate	.01247		
education level			
University	.05391	3.3	2.00 0.046
education level	.04279		
Post graduate	.00202	0.0	-0.00 1.000
education level	.00202	0.0	0.000 1.000
Alexandria	.01415	-1.0	-0.64 0.524
7 Hexandria	.01617	1.0	0.04 0.324
Port Said	.00404	-3.3	-1.42 0.156
Fort Salu	.00404	-5.5	-1.42 0.130
Coor		0.0	0.66 0.512
Saez	.00404	0.9	0.00 0.512
D. I. I.	.00303	4.7	1.50.0.105
Damietta	.05829	-4.7	-1.50 0.135
	.06772		
Dakahlia	.04582	7.1	3.05 0.002
	.03066		
Sharkia	.0465	-0.2	-0.06 0.951
	.04683		
Kalyoubia	.03841	2.5	0.97 0.330
	.03369		
Kafr-Elsheikh	.09063	11.2	4.16 0.000
	.06199		
Gharbia	.04919	-3.2	-1.16 0.245
	.05593		
Menoufia	.00708	-4.7	-2.11 0.035
	.01247		
Behera	.06907	12.1	5.05 0.000
201101	.03942		
Ismailia	.03605	-8.8	-3.60 0.000
iomania	.05559	0.0	5.00 0.000
Giza	.03706	-2.6	-0.93 0.350
UIZa	.03700	-2.0	-0.75 0.550
Beni-Suef		6.7	2.32 0.020
Delli-Suel	.08625	0.7	2.32 0.020
	.07008	6.4	2.06.0.020
Fayoum	.07244	-6.4	-2.06 0.039
	.08693	1	
Menia	.06233	2.1	0.82 0.412
	.05728		
Asyout	.07884	-8.1	-2.69 0.007
	.09872		

Suhag	.05559	7.7	3.20 0.001
	.03807		
Qena	.06435	-4.4	-1.53 0.126
	.07446		
Aswan	.05627	-8.2	-3.03 0.002
	.07581		
Luxur	.00067	0.0	0.00 1.000
	.00067		
Female	.51988	1.1	0.42 0.678
	.51449		
Household	887.02	-0.3	-0.14 0.890
Income	896.83		
Household	43018 -	8.0	3.33 0.001
Wealth	.49788		

### 

2018				
	Mean		t-test	V(T)/
Variable	Treated	%bias	t p>t	V(C)
	Control			
Living in a rural	.72051	-5.3	-2.04 0.041	
area	.74483			
Reads&writes	.08457	0.7	0.29 0.770	
(for a father)	.0824			
Less than	.03303	-0.4	-0.22 0.823	
intermediate	.03412			
(for a father)				
Intermediate	.01996	0.6	0.49 0.622	•
education level	.01815			
(for a father)				
Above	.00218	0.5	0.63 0.527	•
intermediate	.00145			
education level				
(for a father)				
University	.00218	-0.3	-0.54 0.593	•
education level	.0029			
(for a father)				
Reads&writes	.07187	1.3	0.42 0.674	
<b>x</b> 1	.06897		1.04.0.170	
Less than	.12341	-4.0	-1.36 0.173	•
intermediate	.13575			
education level	07004	2.6	1.02.0.210	
Intermediate	.27804	-2.6	-1.02 0.310	•
education level	.29038	1.2	0.62.0.527	
Above	.01633	-1.3	-0.62 0.537	·
intermediate	.01851			
education level				

IInizonaity	.05517	2.6	1.60 0.110	
University		2.0	1.00 0.110	•
education level	.04574	1.0	0.79.0.429	
Post graduate	.00327	1.0	0.78 0.438	•
education level	.00218	1.2	0.02.0.251	
Alexandria	.01162	1.3	0.93 0.351	•
	.00907	0.4	0.00.0.010	
Port Said	.00363	0.4	0.23 0.818	•
	.00327		0.00.0.505	
Saez	.00472	-0.7	-0.38 0.705	•
	.00544			
Damietta	.06062	-0.2	-0.06 0.955	•
	.06098			
Dakahlia	.03702	-7.9	-2.86 0.004	•
	.05299			
Sharkia	.05082	3.3	1.27 0.204	•
	.04356			
Kalyoubia	.03884	2.9	1.16 0.247	
	.03303			
Kafr-Elsheikh	.08893	0.4	0.14 0.887	
	.08784			
Gharbia	.04537	3.0	1.14 0.255	•
	.0392			
Menoufia	.00508	1.3	0.82 0.413	
	.00363			
Behera	.08494	-1.5	-0.48 0.632	
	.08857			
Ismailia	.0363	-4.5	-1.83 0.067	
	.0461			
Giza	.04283	-5.4	-1.89 0.059	
	.05372			
Beni-Suef	.08312	9.5	3.35 0.001	
	.05989			
Fayoum	.07877	3.2	1.02 0.307	
5	.07151			
Menia	.06534	-5.2	-1.78 0.075	
	.07768			
Asyout	.08203	-0.9	-0.29 0.770	
~ ) ~	.08421			
Suhag	.05045	-5.9	-2.15 0.032	
~	.06388	0.7	2.10 0.002	
Qena	.05372	5.9	2.15 0.031	_
X viin	.04138	0.7	2.10 0.001	
Aswan	.05263	0.6	0.24 0.808	
1 10 11 411	.05118	0.0	0.21 0.000	
Luxur	.00109	0.8	0.45 0.655	
	.00073	0.0	0.75 0.055	•
Female	.53285	7.4	2.75 0.006	
	.33283 .49583	/.4	2.75 0.000	•
	.47303			

Household	1888.1	-0.3	-0.10 0.924	1.11*
Income	1906.6			
Household	36785 -	0.2	0.09 0.929	1.07
Wealth	.36944			

### Table 1. Indices of intergenerational occupational mobility

	Shorrock	Bartholomew	Number of observations
1998			
	0.86	0.27	3544
2006	0.85	0.27	4615
2012	0.84	0.29	4623
2018	0.86	0.26	4074

Source: our elaboration on the ERF Surveys.

				Father's	Occupatio	n				
Child's Occupation	Managers	Professionals	Technicians and associate professionals	Clerical support workers	Service and sales workers	Skilled agricultural, forestry and fish	Craft and related trades workers	Plant and machine operators, and assemblers	Elementary occupations	N
Managers	18.13	10.00	16.07	11.90	6.32	3.97	7.48	5.85	6.80	280
Professionals	17.95	40.00	19.64	23.81	13.05	6.42	9.98	12.87	3.88	433
Technicians and associate professionals	4.40	6.67	8.93	8.33	4.63	2.44	5.22	6.43	1.94	146
Clerical support workers	8.61	7.33	7.14	13.10	8.63	3.42	9.30	14.04	0.97	240
Service and sales workers	13.55	8.00	5.36	8.93	10.11	8.09	9.98	5.26	13.59	335
Skilled agricultural, forestry and fish	20.15	23.33	33.93	22.62	36.00	61.58	23.58	24.56	27.18	1,430
Craft and related trades workers	12.27	4.00	7.14	9.52	13.89	8.23	28.34	17.54	18.45	451
Plant and machine operators, and assemblers	3.48	0.67	1.79	1.19	4.84	3.70	2.95	12.28	5.83	139
Elementary occupations	1.47	0.00	0.00	0.60	2.53	2.16	3.17	1.17	21.36	90
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	3,544

Table 2. Transition Matrices Estimations: Occupation Based Estimations (1998)

Note: We use the ISCO Classification. See the text for the description of occupational categories. The figures represent column percentages.

	Father's Occupation											
Child's Occupation	Managers	Professionals	Technicians and associate professionals	Clerical support workers	Service and sales workers	Skilled agricultural, forestry and fish	Craft and related trades workers	Plant and machine operators, and assemblers	Elementary occupations	N		
Managers	24.80	8.92	8.73	5.26	6.82	3.94	8.30	5.31	3.45	382		
Professionals	18.10	40.76	20.96	25.00	8.53	6.01	7.04	14.16	4.14	505		
Technicians and associate professionals	9.67	12.74	16.16	14.47	10.39	5.03	7.04	10.03	2.76	366		
Clerical support workers	3.43	3.82	5.68	18.42	4.19	1.53	6.14	8.26	1.38	174		
Service and sales workers	12.01	11.46	10.48	17.11	18.29	9.02	12.64	10.03	15.86	542		
Skilled agricultural, forestry and fish	14.20	11.46	15.72	10.53	26.36	58.34	15.70	18.58	30.34	1,584		
Craft and related trades workers	11.23	8.28	14.41	5.26	15.97	10.11	33.03	15.63	24.14	681		
Plant and machine operators, and assemblers	4.52	2.55	4.80	3.95	7.13	4.10	7.76	15.63	8.97	277		
Elementary occupations	2.03	0.00	3.06	0.00	2.33	1.91	2.35	2.36	8.97	104		
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	4,615		

 Table 3. Transition Matrices Estimations: Occupation Based Estimations, 2006

	Father's Occupation											
Child's Occupation	Managers	Professionals	Technicians and associate professionals	Clerical support workers	Service and sales workers	Skilled agricultural, forestry and fish	Craft and related trades workers	Plant and machine operators, and assemblers	Elementary occupations	N		
Managers	24.13	10.87	9.93	8.70	6.91	5.66	5.61	6.64	6.63	424		
Professionals	21.72	43.91	24.82	29.35	9.87	7.61	9.15	13.50	10.50	653		
Technicians and associate professionals	10.11	9.13	21.63	10.87	7.89	5.47	9.56	9.84	8.10	403		
Clerical support workers	3.32	3.91	3.90	6.52	1.64	2.01	2.70	2.75	3.31	128		
Service and sales workers	13.12	10.00	12.06	8.70	22.37	8.11	12.27	8.47	12.34	512		
Skilled agricultural, forestry and fish	7.99	10.87	6.03	17.39	16.78	46.01	9.77	12.36	16.94	1,087		
Craft and related trades workers	9.50	6.52	10.28	5.43	17.76	13.26	33.47	17.39	19.89	722		
Plant and machine operators, and assemblers	6.79	2.61	6.74	8.70	9.87	5.85	9.98	21.97	11.05	405		
Elementary occupations	3.32	2.17	4.61	4.35	6.91	6.03	7.48	7.09	11.23	289		
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	4,623		

## Table 4. Transition Matrices Estimations: Occupation Based Estimations, 2012

Father's Occupation										
Child's Occupation	Managers	Professionals	Technicians and associate professionals	Clerical support workers	Service and sales workers	Skilled agricultural, forestry and fish	Craft and related trades workers	Plant and machine operators, and assemblers	Elementary occupations	N
Managers	10.96	7.88	4.86	8.12	5.84	2.92	4.89	6.17	1.15	208
Professionals	25.57	42.86	25.00	25.46	12.35	6.46	8.41	12.01	8.05	538
Technicians and associate professionals	5.02	8.37	13.89	5.54	5.05	2.85	3.72	6.17	3.45	190
Clerical support workers	10.05	8.37	11.81	12.55	7.30	3.68	7.44	8.44	4.60	276
Service and sales workers	16.89	15.76	14.58	14.02	26.15	14.44	18.00	17.86	25.29	738
Skilled agricultural, forestry and fish	13.24	8.87	10.42	14.39	18.63	49.03	15.07	12.34	17.24	1,103
Craft and related trades workers	10.50	5.91	13.89	12.92	12.57	13.19	30.53	13.64	16.09	604
Plant and machine operators, and assemblers	5.48	0.99	4.86	6.27	9.54	4.86	9.00	20.78	9.20	311
Elementary occupations	2.28	0.99	0.69	0.74	2.58	2.57	2.94	2.60	14.94	106
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	4,074

 Table 5. Transition Matrices Estimations: Occupation Based Estimations, 2018

# Table 6. Transition Matrix Estimations, Occupational Classifications, Panel A. In 1998

Father's occupation				
Child's	White	Blue	Agriculture	Ν
occupation	collar	collar		
White collar	46.10	34.30	24.12	1,099
Blue collar	22.56	44.49	14.12	1,067
Agriculture	31.33	21.20	61.74	1,430
	100	100	100	3,596

### Panel B. In 2006

	Father's occupation				
Child's	White	Blue	Agriculture	N	
occupation	collar	collar			
White collar	51.31	34.76	22.98	1,190	
Blue collar	20.01	44.08	9.66	920	
Agriculture	28.68	21.16	67.36	1,434	
	100	100	100	3,544	

### Panel C. In 2012

	Father's occupation				
Child's	White	Blue	Agriculture	Ν	
occupation	collar	collar			
White collar	52.54	31.59	22.45	1,765	
Blue collar	20.02	47.89	10.21	1,267	
Agriculture	27.44	20.52	67.34	1,591	
	100	100	100	4,623	

### Panel D. In 2018

Father's occupation				
Child's	White	Blue	Agriculture	N
occupation	collar	collar		
White collar	56.17	42.33	26.84	1,797
Blue collar	15.12	38.78	9.16	837
Agriculture	28.71	18.89	64.01	1,440
	100	100	100	4,074

## Table 7. PSM Estimates of probability of becoming a blue-collar worker for children of fathers in agricultural jobs versus children of fathers in blue collar jobs

	Outcome	Unmatched Sample (which is based on the First stage probit)	Observations per group and total
1998	-0.06**** (0.01)	-0.04 (0.009)	T=2424 C=2997 N=5421
2006	-0.05*** (0.01)	-0.06 (0.009)	T=2780 C=3868 N=6648
2012	-0.09*** (0.01)	-0.09 (0.001)	T=2968 C=4217 N=7185
2018	-0.09*** (0.01)	-0.08 (0.009)	T=2755 C=5443 N=8198

Source: our elaboration on the ERF Surveys. Standard errors are given in the parentheses. Treatment group: a father with an agricultural occupation. Control groups are a father with blue collar occupations in the first model.

	Outcome	Unmatched Sample (which is based on the First stage probit)	Observations per group and total
1998	-0.07*** (0.02)	0.01 (0.009)	T=2424 C=2416 N=4840
2006	-0.05 ^{***} (0.03)	0.04 (0.009)	T=2780 C=3016 N=5796
2012	-0.05 ^{***} (0.02)	0.02 (0.009)	T=2968 C=3389 N=6357
2018	-0.04 ^{***} (0.02)	-0.03 (0.01)	T=2755 C=3354 N=6109

## Table 8. PSM Estimates of probability of becoming a blue-collar worker for children of fathers in agricultural jobs versus children of fathers in white collar jobs

 Table 9. PSM Estimates of probability of becoming a white-collar worker for children of fathers in agricultural jobs versus children of fathers in blue collar jobs

Year	Outcome	Unmatched Sample	Observations per
		(which is based on	group and total
		the First stage probit)	
1998	0.01***	-0.03	T=2424
	(0.01)	(0.007)	C=2997
			N=5421
2006	0.03***	-0.02	T=2780
	(0.01)	(0.008)	C=3868
			N=6648
2012	0.008***	-0.02	T=2968
	(0.01)	(0.007)	C=4217
			N=7185
2018	0.001***	-0.07	T=2755
	(0.01)	(0.007)	C=5443
			N=8198

## Table 10. PSM Estimates of probability of becoming a white-collar worker for children of fathers in agricultural jobs versus children of fathers in white collar jobs

	Outcome	Unmatched Sample (which is based on the First stage probit)	Observations per group and total
1998	0.01*** (0.01)	-0.11 (0.01)	T=2424 C=2416 N=4840
2006	0.01 ^{***} (0.01)	-0.10 (0.009)	T=2780 C=3016 N=5796
2012	-0.01*** (0.01)	-0.12 (0.009)	T=2968 C=3389 N=6357
2018	0.002*** (0.01)	-0.15 (0.009)	T=2755 C=3354 N=6109

## Table 11. PSM Estimates of probability of becoming an agricultural worker for children of fathers in agricultural jobs versus children of fathers in blue collar jobs

	Outcome	Unmatched Sample (which is based on the	Observations per group and total
		First stage probit)	
1998		0.07	T=2424
	$0.04^{***}$	(0.01)	C=2997
	(0.01)		N=5421
2006	$0.02^{***}$	0.08	T=2780
	(0.02)	(0.01)	C=3868
			N=6648
2012	$0.08^{***}$	0.11	T=2968
	(0.02)	(0.01)	C=4217
			N=7185
2018	$0.08^{***}$	0.15	T=2755
	(0.02)	(0.01)	C=5443
			N=8198

## Table 12.PSM Estimates of probability of becoming an agricultural worker for children of fathers in agricultural jobs versus children of fathers in white collar jobs

	Outcome	Unmatched Sample	Observations per group
		(which is based on the	and total
		First stage probit)	
1998		0.09	T=2424
	0.05***	(0.01)	C=2416
	(0.02)		N=4840
2006	0.04***	0.05	T=2780
	(0.03)	(0.01)	C=3016
			N=5796
2012	0.07***	0.10	T=2968
	(0.02)	(0.01)	C=3389
			N=6357
2018	0.04***	0.18	T=2755
	(0.03)	(0.01)	C=3354
			N=6109

Table 13. MM estimates of the probability of becoming a blue-collar worker for the offspring of agricultural workers versus the offspring of blue-collar workers

	Outcome	Observations per group
		and total
1998		T=2424
	-0.01***	C=2997
	(0.01)	N=5421
2006	-0.03***	T=2780
	(0.01)	C=3868
		N=6648
2012	-0.10***	T=2968
	(0.01)	C=4217
		N=7185
2018	-0.08***	T=2755
	(0.01)	C=5443
		N=8198

Table 14. MM estimates of the probability of becoming a blue-collar worker for the offspring of agricultural workers versus the offspring of white-collar workers

	Outcome	Observations per group
		and total
1998		T=2424
	-0.03***	C=2416
	(0.01)	N=4840
2006	-0.02***	T=2780
	(0.01)	C=3016
		N=5796
2012	-0.02***	T=2968
	(0.01)	C=3389
		N=6357
2018	-0.06***	T=2755
	(0.02)	C=3354
		N=6109

Table 15. MM estimates of the probability of becoming a white-collar worker for the offspring of agricultural workers versus the offspring of blue-collar workers

Year	Outcome	Observations per
		group and total
1998	0.01***	T=2424
	(0.008)	C=2416
		N=4840
2006	0.03***	T=2780
	(0.01)	C=3016
		N=5796
2012	0.02***	T=2968
	(0.008)	C=3389
		N=6357
2018	0.01***	T=2755
	(0.009)	C=3354
		N=6109

# Table 16. MM estimates of the probability of becoming a white-collar worker for the offspring of agricultural workers versus the offspring of white-collar workers

	Outcome	Observations per group
		and total
1998		T=2424
	0.002***	C=2416
	(0.01)	N=4840
2006	-0.01***	T=2780
	(0.01)	C=3016
		N=5796
2012	-0.02***	T=2968
	(0.01)	C=3389
		N=6357
2018	0.001***	T=2755
	(0.01)	C=3354
		N=6109

# Table 17. MM estimates of the probability of becoming an agricultural worker for the offspring of agricultural workers versus the offspring of blue-collar workers

	Outcome	Observations per group
		and total
1998		T=2424
	$0.008^{***}$	C=2997
	(0.01)	N=5421
2006	0.003***	T=2780
	(0.01)	C=3868
		N=6648
2012	0.07***	T=2968
	(0.01)	C=4217
		N=7185
2018	$0.07^{***}$	T=2755
	(0.01)	C=5443
		N=8198

## Table 18. MM estimates of the probability of becoming an agricultural worker for the offspring of agricultural workers versus the offspring of a white-collar worker

	Outcome	Observations per group and total
1998		T=2424
	0.03***	C=2416
	(0.01)	N=4840
2006	0.03***	T=2780
	(0.01)	C=3016
		N=5796
2012	0.05***	T=2968
	(0.02)	C=3389
		N=6357
2018	0.06***	T=2755
	(0.03)	C=3354
		N=6109