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YOUTH VULNERABILITY IN EGYPT AND JORDAN: DIMENSIONS AND DETERMINANTS

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Abstract

Youth unemployment in the MENA region is the highest in the world, at over 40% for males and close to 60% for females. These high levels of unemployment force the most vulnerable of these youth to accept jobs in the informal sector that are insecure and often unsafe. Understanding youth outcomes in the labor market thus requires a broader focus that encompasses a study of not only unemployment and self-employment, but also the availability of decent work. In this study we analyze the static and dynamic nature of vulnerable employment in Egypt and Jordan using recent Labor Market Panel Surveys. We define vulnerable employment as the total of self-employment, unpaid family workers, irregular wage workers and informal private sector workers. We use transition matrices and multinomial logistic regressions to examine workers' labor marker outcomes, and the interactions of their employment vulnerability with other measures of welfare and deprivation, and family socio-economic status. Beside static analysis of youth workers' status, we study dynamically workers' employment growth later in life. Our results show growing trends of vulnerable employment over time in both countries, more so for youth than for older cohorts. Once a young worker starts out in a vulnerable job, she is very unlikely to exit to a better job later on.

ملخص

تعد بطالة الشباب في منطقة الشرق الأوسط وشمال أفريقيا الأعلى في العالم ، حيث تمثل نسبة الذكور فيها أكثر من 40٪ وما يقرب من 60٪ للإناث. هذه المستويات العالية للبطالة تجعل أكثر هؤلاء الشباب عرضة لقبول العمل في القطاع غير الرسمي الذى يفتقر إلى الأمن، وفى كثير من الأحيان إلى الأمان أيضا. وبالتالي ، فإن فهم نتاج عملهم في سوق العمل يتطلب تركيزًا أوسع نطاقاً ليشمل دراسة البطالة والعمل للحساب الخاص فحسب ، بل أيضاً توافر العمل اللائق لهم. في هذه الدراسة ، نقوم بتحليل كل من الطبيعة الساكنة والديناميكية للعمالة الهشة في مصر والأردن باستخدام المسوحات الأخيرة لفريق عمل سوق العمل. والتعريف الذى نستخدمه للعمالة الضعيفة أو الهشة هو جموع العاملين للحساب الخاص والعاملين في الأسرة بدون أجر والعاملين بأجر غير النظاميين والعمال غير الرسميين في القطاع الخاص ، فنحن نستخدم مصفوفات انتقالية وانحدارات لوجستية متعددة الحدود لفحص نتاج عملهم ، والتفاعلات بين هشاشتهم في العمل وضعف تدابير رعاية أخرى ومعانتهم من الحرمان من ناحية، وبين الحالة الاجتماعية الاقتصادية للأسرة، من ناحية أخرى. بجانب التحليل الثابت لوضع العمال الشباب ، ندرس ديناميكيَّة نمو عمالة العمال في وقت لاحق من الحياة ، وتظهر النتائج التي توصلنا إليها الإتجاه المتزايد نحو العمالة الضعيفة مع مرور الوقت في كلا البلدين ، أكثر من زيادة هذا الإتجاه من بين صفوف الشباب من الأجيال الأكبر سنا حيث أنه بمجرد أن يبدأ أحد العمال الشباب في وظيفة ضعيفة ، فمن غير المحتمل أن يخرج إلى وظيفة أفضل في وقت لاحق.

1. Research Question and Motivation

Vulnerable youth are those "not having certain of their basic rights fulfilled" (Skinner et al. 2006), be it material, emotional or social needs (Arora et al. 2015). In Amartya Sen's framework, vulnerabilities represent inadequate capabilities that do not permit young individuals to realize themselves in terms of their "functionings" – or the freedom to choose (Ward 2014). Vulnerabilities may emerge as part of key transitions experienced by most young people, such as those linked to educational attainment, labor-market entry, change in social network, and parenthood (Hargrove et al. 2014). Vulnerabilities also result from entrenched social marginalization and the multiple dimensions of poverty, and can then persist over the life course of young people and even be transmitted across generations (Hardgrove 2014).

Vulnerability of employment is one of the most important vulnerabilities facing MENA-region youth today. Having a good start in the labor market has an important role in young people's lifetime capabilities, but MENA-region youth face notoriously precarious employment prospects. Not only is regional youth unemployment the highest across world regions (Pieters 2013; Economist 2016), but even those who are employed are often forced to accept underemployment and employment in informal and unstable jobs or to migrate across countries and regions (Assaad & Krafft 2014). The World Bank (e.g., World Bank Databank) recognizes the importance of accounting for workers' working conditions by explicitly accounting for work status within employment. When the majority of jobs available to a particular group are irregular jobs, without job security in the form of a contract, paid sick and vacation leaves, social security, and health insurance, this signifies a higher level of instability and risk faced by these workers in all aspects of their lives, and a lower quality of life. It is thus important to analyze the extent of such vulnerable employment for the youth and to examine its evolution over time.

The other problem involves structural faults in the MENA region labor markets where a strong state of duality exists (Assaad 1997, 2014). Public sector jobs offer higher wages, benefits, and long-term job security while employment in the private sector often does not, placing a wedge between the lucky graduates who land public-sector jobs subject to generous contracts, and those who resign themselves to accepting informal-sector jobs or remain unemployed in search of better opportunities. The hope of landing a public sector job may even discourage young MENA workers from seeking lower quality jobs in the private sector and swell the ranks of the unemployed (Assaad 1997; Boudarbat 2004). Some evidence suggests that restrictive employment contract laws push down labor demand, and formal minimum wages in some MENA countries have been found high relative to mean wages and harmful to employment (Agénor & El Aynaoui 2003; Agénor et al. 2004; Kabbani & Kothari 2005). By the same token, the large numbers of unemployed workers seeking formal employment empower large private-sector employers to extract surplus from their hires, while restraining employment and further aggravating the unemployment problem. For example, Recent studies have found evidence that type of higher education, a measure of human capital and skill, has little impact on employment

outcomes, while circumstances such as family background and social class play the largest role in choosing the limited hires from large applicant pools (Assad, Krafft and Salehi-Isfahani 2018, Krafft and Assaad 2016). Such practices exacerbate the degree of inequality of opportunity.

We examine the incidence and evolution of vulnerable employment in Egypt (1998-2012) and Jordan (2010-2016) over periods of far reaching changes in both economies. In Egypt, we rely on the Egypt Labor Market Panel Surveys (ELMPS) for years 1998, 2006 and 2012, a time span initially characterized by a strong push toward economic reform, trade liberalization and privatization of state-owned enterprises, followed by the financial crisis in 2008 and a rise in people's discontent leading to the 2011 revolution and regime change. In Jordan, we use the Jordan Labor Market Panel Surveys (JLMPS) for 2010 and 2016, a period starting with a time of unrest due to deteriorating economic conditions, and spanning the post Arab Spring and the Syrian civil war period during which Jordan absorbed a significant share of refugees.

Our data allow us to perform static analysis of the degree of workers' vulnerability at several points in their lives. We are also able to examine the dynamic implications of starting out in a vulnerable job in the labor market, and the prospects of exiting into a more decent job later in life, by following the same individuals over time. We can examine the role of circumstances such as family socio-economic conditions, deprivation and wealth, and father's education and occupation on the ability of youths to obtain decent jobs, and to later exit poor jobs into more desirable employment.

The remainder of this paper is organized as follows. Section two reviews relevant literature; section three discusses our data sources and their limitations. Section four describes the empirical methods we use to identify the drivers of individuals' employment vulnerability and employment mobility, followed by a discussion of the results of these analyses. Section five concludes.

2. Previous Literature and Value Added
Pieters (2013) compared youth employment prospects across developing countries, and found the MENA-region youth unemployment to be the highest and rising at the fastest rate compared to other world regions. Kabbani and Kothari (2005) and studies cited by them report that MENA-region youth face precarious employment prospects, particularly women, with regional and company social norms, and women's breaks from labor market due to childbearing contributing to gender gaps. Kabbani and Kothari (2005) do not use panel data or regressions to study causes of labor-market vulnerabilities, and limit themselves to reporting summary statistics.

A growing body of research has used microdata to track and compare the outcomes of various social groups. Majbouri (2017) compared mobility in household expenditures per capita in Egypt and Jordan, linking observations across household budget surveys using pseudo panels. He found mobility in Egypt to be low relative to that observed in Jordan as well as in absolute terms.

The proliferation of labor market panel surveys in MENA has given rise to a collection of studies of workers' outcomes. Assaad and Krafft (2015), using ELMPS 1998-2012, analyzed labor market conditions for all working age workers, and found significant differences in job stability, working conditions and the risk of poverty across individuals with different employment statuses. Workers with irregular employment were found to be most vulnerable. Moreover, job creation, access to formal jobs and the share of irregular wage work deteriorated over time. Assaad and Krafft (2014) used ELMPS 2012 to study the transitions of Egyptian youth from school to labor market, with a special emphasis on women and marriage decisions (see also references cited in Assaad & Krafft 2014). They concluded that workers' labor-market prospects were constrained by a mismatch of skills acquired in school and characteristics demanded by employers, and non-meritocratic hiring processes at employers. Among women, a complex relationship between their families' resources and their marriage plans also played an important role in driving their labor-market outcomes. Men are often forced to accept precarious employment, while many women, regardless of their education level, become entirely discouraged from the labor market.

Amer (2012) and Assaad (2012) used the JLMPS 2010 to study the structure of the Jordanian labor market, and found that the public sector was giving way to the private sector in recent decades as the main employer, but private-sector jobs have become more precarious and less likely to carry long-term contracts. Jordanian youth were found to be highly immobile in their employment status and unable to cross from informal jobs to formal jobs, even though they could cross from formal private-sector jobs to public jobs. Mryyan (2012) and Assaad et al. (2014) found that Jordanian female workers have been especially vulnerable in recent decades on account of the falling public-sector employment, unaccommodating nature of private-sector employment, and slow adjustment of labor laws. Indeed, the share of youth not in employment, education or training – thus including discouraged workers – is among the highest across developing countries worldwide, for men but especially for women (Pieters 2013).

Fehling et al. (2015) provide a comprehensive review of existing literature on youth vulnerability across MENA, focusing on health, economic wellbeing, education, and the impacts of conflicts and violence. Unemployment and gender gaps in socio-economic outcomes are highlighted as the most pressing themes.[3]

Our study aims to contribute to the existing literature by investigating the drivers of employment vulnerability among youth, and their propensity for upward mobility. We study the contribution of individuals' preexisting circumstances and labor-market experiences on their earnings, on

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[3] Another body of literature considers the dynamics of poverty, using household budget or labor market panel data for various time periods (Haddad & Ahmed 2003; AlAzzawi 2010b; Marotta & Yemtsov 2010; AlAzzawi & Said 2012). While relevant, this literature is not discussed here to save space.

their probability of landing a high-quality starting job, and on their probability to transition to higher quality jobs later in their career. As another innovation, we use data from multiple waves of nationally representative, high-quality, harmonized panel surveys for Egypt (three waves) and Jordan (two waves) that measure individuals' circumstances, track the socio-economic outcomes of the same individuals over time, and also link outcomes of children to those of their parents.

Tracking the socio-economic status of youths over time can provide tremendous insight into the process by which the prevalence and degree of vulnerability get transmitted over time, and the implications this has for social mobility and long-term vulnerabilities economy-wide. Results of our vulnerability and mobility analysis will suggest how difficult it is to escape vulnerability as measured by income and job quality, or to transition to a "decent job" if you start your career in a "poor quality" one. The findings will point to policy recommendations regarding how to target the vulnerable using which policy interventions.

3. Data
The data used in this study come from the 1998, 2006 and 2012 waves of the ELMPS, and the 2010 and 2016 waves of the JLMPS. These nationally representative labor force sample surveys were conducted by the Economic Research Forum (ERF) in cooperation with the national statistical agencies. The newer waves of the ELMPS and JLMPS track the labor market and demographic characteristics of the households and individuals interviewed in prior waves, new households that have emerged as a result of splits in the original households, and refresher sample of entirely new households.

The 2006 panel data for Egypt consist of 3,684 households from the original ELMS 1998 survey and 2,167 new households that emerged as a result of splits in the original households, in addition to a refresher sample of entirely new households that will not be used in our analysis. Of the 23,997 individuals interviewed in 1998, 22,987 were still alive or in the country in 2006 and 17,357 of those (75.5%) were successfully re-interviewed in 2006. The 2012 panel is made up of 6,752 households from the 2006 sample, 3,308 new households that emerged from those households as a result of splits, plus a refresher sample. The total for 2012 is 12,060 households and 49,186 individuals (Assaad & Krafft 2013).

Similarly, the panel data for JLMPS 2010 include 5,102 households and 25,953 individuals of all ages. In the JLMPS 2016, 3,057 of the original households were located and interviewed, and a further 1,221 split households were found. The refresher file includes 2,950 households with 13,423 individuals, for a total of 7,228 households and 33,450 individuals in the JLMPS 2016.

These data sets are suitable for our endeavor as they contain detailed information on individuals' labor market earnings, occupation, education, productive as well as non-productive household assets, and various demographic characteristics. In addition, the panel data include comparative

statistics on fathers and sons, both contemporaneous individual (for those individuals observed in earlier years, whose sons then split into separate households by the following wave) as well as retrospective data, which can be used to determine socio-economic circumstances in the study of individuals' opportunities, and the degree of intergenerational employment mobility.

4. Vulnerable Employment: Its State and Evolution over Time
While youth unemployment is very high in the MENA region in general, only those who are supported by family or the state can afford to stay unemployed. The most vulnerable groups are forced to accept low quality jobs in the informal economy or to become self-employed to be able to support themselves and their dependents.

Our first task is to identify and describe measures that capture the monetary and non-monetary aspects of workers' labor-market vulnerability adequately. We take advantage of the panel aspect of the data and compare those who were youth (aged 15 to 29) in the initial period and how their outcomes evolved over time during all subsequent periods available, to those who were not youth.

We define vulnerable employment as the total of unpaid family workers, self-employed (without employing others), irregular wage workers and informal private sector workers. All these workers share undesirable job characteristics such as lack of contract, absence of benefits such as health and social insurance, and paid leaves.[4] These workers are also vulnerable in the sense that they are least likely to have any form of social protection in the event of unexpected economic shocks (World Bank). Such jobs are almost always associated with low wage, high risk in terms of health and safety hazards. The prospect of job security is almost completely nonexistent.

We distinguish between youth (age 15 to 29)[5] in each year, and those aged 30 to 59. We follow these youth over time: 1998 youth in Egypt are followed over 8 years, in 2006 (when they are between 23 and 37 years old) and after another 6 years, in 2012, when they are between 29 and 43 years old. We thus follow those "1998 youth" over a large segment of their working career. Similarly, the "2006 Egyptian youth" are followed over 6 years, in 2012, when they are between

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[4] The World Bank defines vulnerable employment as the sum of unpaid family workers and self-employed (without employing others). This definition represents a lower bound on ours. We have a rich data set that allows us to delve deeper into the category of wage workers, and allows us to distinguish between those with "decent jobs" in the formal public or private sector and those with more precarious employment options. We argue that in the MENA in particular, irregular wage work and informal private sector jobs are no less precarious and should therefore be included under vulnerable employment. Furthermore, Assaad and Krafft (2015) found that irregular wage work in particular grew the most during 1998-2012 and was most likely associated with a rise in poverty and vulnerability.
[5] Since we are primarily concerned with labor market outcomes, we extended the age of youth to incorporate those who were 15 to 29 rather than the traditional definition of 15 to 24. Many youth will remain students in postsecondary and university education until their early twenties and hence limiting the youth age to 24 ignores much of the labor market status that these youth will face. The military draft in Egypt is also another major delaying factor for youth males and warrants the expansion of the sample to include a slightly older group.

21 and 35 years old. In Jordan we follow those who were youth in 2010 over the next 6 years, in 2016, when they are between 21 and 35 years old. Our comparison group is workers aged 30 to 59 in each survey year and we then follow these workers over the next 8 to 14 years in Egypt, and 6 years in Jordan.[6]

Tables 1a–1c report summary statistics for our data for Egypt by year, both statically and dynamically. We see that vulnerable employment was rising steadily over the study period, from 16.5 over all age groups in 1998 to 24% in 2012. Youth vulnerable employment was also higher in all years and especially by the usual definition[7] of employment (for which we only have data for those who were youth in 2006 and 2012). More disturbing however is the lower likelihood that youth who start out in vulnerable employment would exit it at a later date. Panels 2 and 3 of Table 1a show the summary statistics for 1998 youth in the years 2006 and 2012. Vulnerably employed youth in 1998 were more than twice as likely to remain so by 2006 than non-youth, and again by 2012. Similarly, between 2006 and 2012, while only 18–19% of non-youth who were initially in vulnerable employment stayed so, for youth the likelihood they remained in that category was as high as 30%.

Tables 1d-1e report similar statistics for Jordan. Limiting our sample to Jordanian nationals (to eliminate any bias due to the Syrian refugee influx in 2016 data), who were non-students in each period, we see some subtle differences both between youth and non-youth as well as overtime. Youth in Jordan are better educated than non-youth. However, their unemployment rate is 3-4 times higher than non-youth. The share of unemployed youth has also been rising over the period 2010 to 2016. In terms of vulnerable employment, the share is very similar for youth and non-youth. Notably however, the share of employed youth dropped sharply overtime, from 48% in 2010 to 37% in 2016. In Jordan, youth are less likely to accept vulnerable employment and tend to either stay unemployed or drop out of the labor force if no good jobs area available (note that these are not students).

4.1. Static Analysis of Employment Status
Figures 2a–c report on the employment status of all Egyptian youth (15 to 29) who were not students, for 1998, 2006 and 2012, respectively. We distinguish between males and females and show the employment sector of those who were employed. We also include the unemployed and out of labor force categories since these are especially important for females. In 1998, over 40% of non-youth males were in the public sector and about 15% were employers and 10% in formal

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[6] In a previous version of this paper our youth group was workers aged 15 to 24, and comparison group was workers aged 25 to 64. Reviewers commented that the youth definition was too narrow as discussed in the previous footnote while the comparison group was too broad and lacked homogeneity as a group of workers. We therefore changed the age brackets, and made our comparison group of those aged 30 to 59 to increase the appropriateness of the comparison. We also experimented with a comparison group of those aged 30 to 54 but the differences were negligible

[7] Throughout this study the usual definition of employment refers to a three month reference period, while the current definition refers to a one week reference period.

private sector jobs. The self-employed, unpaid family workers and informal private workers were a relative minority, at under 25% of the non-youth. For youth, the informal private sector was the largest category of employment, followed by unpaid family workers and irregular wage workers. Youth back in 1998 had a very low probability of landing formal sector jobs whether in the public or the private sector. Unemployment rates among youth were also notably higher in 1998: 15% for youth compared to less than 5% for non-youth workers.

The situation for females was even bleaker than for males across the board. The majority of females were out of the labor force regardless of age. Older females (age 30 to 59) were either in the formal public sector or out of the labor force. For youth females they had an even smaller probability of landing a good public-sector job and hence largely stayed out of the labor force. Female unemployment rates were much higher reflecting the fact that these young females who might not yet be married were more likely to still be searching, but are still only interested in the "good" public sector jobs that were increasingly hard to come by.

Between 2006 and 2012, the data suggest that vulnerable employment increased significantly. The informal private sector absorbed over a quarter of all youth males in 2006 while other vulnerable categories such as unpaid family workers, self-employed and irregular wage workers absorbed an additional 30%. Less than 20% of youth males had a formal public or private sector job by 2006. The situation for older workers also deteriorated somewhat with a smaller share in the formal public and private sectors than 1998.

Similar analysis for Jordan (Figures 2d-e) reveals a somewhat better overall employment picture, for both youth and non-youth. In 2010 around 50% of non-youth males were in formal employment, very few irregular wage workers and around 25% in self-employment, unpaid family workers or informal private categories. Interestingly youth males in Jordan did much better than both those in Egypt and, somewhat, than non-youth in Jordan. Like Egyptian females, the majority of Jordanian females were out of the labor force or in formal employment. By 2016, the strains of the regional crisis were much more apparent in Jordan[8] with 2.5 to 3 times more male workers in both age groups out of the labor force (note these are non-students) and much larger unemployment rates among Jordanian youth. While formal employment remained the main employer of both age groups in 2016, an interesting development is that fewer youth were now employed in the informal private sector, presumably replaced by refugees and migrant workers, and were pushed to the ranks of the unemployed or out of the labor force completely. The picture for females is not much different from 2010, again with the majority out of the labor force. These results generally corroborate the conclusions in earlier studies that Jordanian young men face poor access to decent work (Amer 2012; Assaad 2012), and that women's prospects are possibly bleaker still (Mryyan 2012; Assaad et al. 2014).

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[8] Our analysis of Jordan is limited to Jordanian nationals to avoid sample-selection problems due to Syrian refugees and other non-resident groups who were a large proportion of the 2016 sample.

4.2. Dynamic Analysis of Employment Outcomes:

Figure 3 shows the transitions between employment sectors for 1998 youth males in 2006 (Figure 3a) and 2012 (Figure 3b), and for 2006 youth males in 2012 (Figure 3c). This allows us to examine the prospects of exiting the vulnerable job categories as these youth grow older and obtain more experience in the labor market. The results suggest very low degrees of mobility to better jobs in the formal public or private sectors over time. Over 60% of those in vulnerable employment in 1998 remain so by 2006 and even by 2012. The chance of moving from the informal private to formal employment was slightly higher between 1998 and 2006 than between 2006 and 2012. Figure 3d shows the same transitions for Jordanian male youths between 2010 and 2016. Jordanian youth were clearly more likely to transition to formal sector jobs between 2010 and 2016 than Egyptian youth at any point in the study period. Less than 40% of Jordanian youth started in vulnerable jobs over this period, while in Egypt the shares were over 60% for all periods. Notably, however, many Jordanian workers chose unemployment or exiting the labor force by 2016 instead of holding on to vulnerable jobs, a reflection of the increasing competition and instability in the labor market due to competition from migrants and refugees refugee crisis. Thus while Egyptian youth fared worse in terms of being stuck in vulnerable employment, Jordanian youth were pushed out of employment rather than accepting ever more vulnerable jobs.

4.3. Cross Vulnerabilities: The role of family wealth and father's education in employment outcomes

To examine the role of workers' socioeconomic circumstances on their employment status we examine the association between family wealth and current employment status, as well as initial family wealth, i.e. at the time the individuals were 15 to 29, and how this family wealth has an impact on their prospect of finding better jobs later in life.

Because individual wage earnings fluctuate across years and do not account for within-household transfers, in-kind donations, fiscal transfers and publicly provided goods, they may not be the best measures of individuals' preexisting resources or welfare. Following a large body of empirical studies, we impute households' accumulated asset wealth and use that as an alternative measure of preexisting vulnerability (Assaad et al. 2009; AlAzzawi 2010a; AlAzzawi & Hlasny 2018).

Following McKenzie (2005), we develop a one-dimensional index of wealth, w, from the first component in the principal component analysis (PCA) of households' all available productive and non-productive assets, livestock, farm equipment and capitalization of firms owned by households (Hlasny & AlAzzawi 2018). This first component can be expressed as the weighted sum of households' assets x_p (numbering P assets, $p \in P$), where x is a potentially non-integer

stock of each asset. Asset ownership is standardized by the mean and standard deviation across households, and the weight a_p on each standardized unit of asset p is selected to maximize sample variance of the index subject to $\Sigma_p a_p{}^2=1$:

$$w = \sum_p a_p \left.\frac{(x_p - \overline{x_p})}{stdev(x_p)}\right. \tag{1}$$

Household level subscripts are omitted here for clarity of presentation. The PCA method assigns the highest weights to assets that vary most across households, thus informing on maximum discrimination in asset ownership between households, and allowing for heavier tails of the wealth distribution. By accounting for non-productive as well as productive assets, we expand on the coverage typically used in studies of household assets, and we alleviate biases due to systematic differences between urban and rural households.

Regression scores from the first principal component are used as the index of households' wealth. The estimated index is distributed around zero with unit variance, but may not be distributed symmetrically, depending on the distribution of the stocks of all included assets. To facilitate interpretation vis-à-vis real-world distribution of wealth, the index is standardized to be between 0 and 100:

$$\widetilde{w} = 100 \times \left.\frac{(w - \min w)}{(\max w - \min w)}\right. \tag{2}$$

This index measures the relative wealth of any household in the range between the poorest and the wealthiest households in the sample. This transformation keeps relative distances between all scores unchanged, and does not affect the delineation of wealth quantiles. Setting the minimum to 0 corresponds to assuming that the lowest true household wealth in the sample is zero.[9] Now, differences in wealth scores across households with different profiles of asset ownership are not amenable to cardinal interpretation. This is because asset loadings derived in PCA do not reflect precisely the real market values of individual asset types. Nevertheless, the wealth index may preserve the correct ranking of households on the wealth scale, and may facilitate their classification into the correct wealth quantile groups.

4.4. Static Cross Vulnerabilities
Figures 4a-4e show the employment outcomes of youth by the wealth quintile of their families in the same year. Starting with Egypt in figures 4a-c, clearly, youth who come from families in the lower wealth quintiles are more likely to be in one of the vulnerable employment categories,

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[9] This appears plausible given that our analysis considers gross non-depreciated assets and does not account for household debt or future liabilities and given the high degree of poverty gaps in the MENA region. For example, the lowest-wealth household in the 1998 Egyptian survey owns 25% of capital in a co-owned firm worth 1000-4999LE, and owns a 2-room dwelling of 30m^2 with mud floor, brick and mud walls, wooden roof, water from a well, toilet connected to an indoor tank, and kerosene cooker. It has no other reported assets. The lowest-wealth household in the 2006 Egyptian survey rents a 3-room dwelling of 40m^2 with a wooden roof, brick and mud walls, mud floor, electricity lighting, water tap connected to public network, toilet connected to an indoor tank. The household owns a black-and-white TV, landline phone, small person-pulled cart, selected livestock, but no other assets. These households are modelled as having zero wealth.

especially irregular wage work and informal private jobs. The share of irregular wage work rose sharply for the bottom two quintiles in 2012 in Egypt to become the largest single job category for youth in these two quintiles. Formal public and private jobs were most prevalent among the top quintile of the wealth distribution. Also notable, is that in 1998 and 2006 there were more unemployed and out of the labour force youth males in the middle quintile than in 2012, where more middle class youth were accepting informal private and especially irregular wage work than before.

For Jordan (Figures 4d-e), formal public and private jobs were somewhat more equally distributed among the wealth quintiles in 2010, with the top quintiles having only a small advantage in formal public jobs, but a marked advantage in terms of formal private jobs. In fact, a third of the second and third wealth quintile youth are employed in public sector jobs, which is a stark contrast to youth in Egypt. Vulnerable employment was also roughly equally prevalent among youth in all wealth quintiles in 2010, with most of that vulnerable employment being in informal private jobs (self-employment, unpaid family workers and irregular wage work were equally rare among youth in all quintiles).

By 2016, employment overall shrunk for all Jordanian youth in all quintiles (as noted earlier) and the share of unemployed and out of the labour force does not seem to follow any single pattern with respect to wealth quintile: once again we see that these outcomes were fairly equally distributed across all quintiles. In fact, both the top and bottom wealth quintiles have very similar shares of unemployed and out of the labour force youth males. Youth in the 4th quintiles have the highest employment rates in 2016, with higher employment in formal public and private jobs than all other quintiles.

Similarly, we also examine the relation between father's education and employment outcomes. Figures 5a-5c present those for Egypt and Figures 5d-e do the same for Jordan. For Egypt, there is a clear pattern whereby the higher the education level of the father, the lower the prevalence of vulnerable employment and the higher the prevalence of formal public and private employment for their youth sons. For Jordan, once again we say a more equal distribution of good jobs for youth regardless of their fathers' education levels.

4.5. Persistence of Cross Vulnerabilities
An interesting dimension of these data sets is that they allow us to track the same individuals over time and follow their employment outcomes at a future date as they grow older and more experienced, given their initial family wealth when they were youth. We thus examine the persistence of employment vulnerability over time, given initial family wealth status.

In Figure 6a we present the 2006 employment sector of males who were youth in 1998, relative to their family wealth in 1998. There is a clear downward trend in persistence of vulnerable employment by wealth quintile: those in the bottom quintile in 1998 were most likely to remain

in vulnerable employment 8 years later in 2006, and the likelihood of this 2006 vulnerable employment falls as wealth quintile in 1998 rises. The persistence of vulnerability is even stronger when we follow 1998 youth 14 years later into 2012 (figure 6b), by their 1998 wealth quintiles. Once again those who were in the bottom wealth quintile in 1998 are the most likely to have vulnerable jobs 14 years later in 2012. Those in higher 1998 wealth quintiles are more likely to have formal public and private jobs in 2012. Similar, but more pronounced inequalities prevail for those who were youth in 2006. Over 60 % of 2006 youth in the bottom wealth quintile in 2006 had vulnerable jobs in 2012, while only 35% of those in the top quintile in 2006 had vulnerable jobs by 2012.

For Jordan we are able to examine the employment vulnerability of 2010 youth in 2016, by their 2010 family wealth quintiles (Figure 6d). Even with the lower overall vulnerable employment in Jordan, we can still see a pattern where higher 2010 wealth is associated with lower vulnerable employment. As noted earlier, unemployment and being out of the labor force were the most prominent developments for Jordanian youth in 2016, and once again we see a negative association: higher 2010 wealth is associated with a somewhat smaller rate of unemployment and being of the labor force. Formal private and public jobs in 2016 are also most prevalent among 2010 youth whose families were in the top wealth quintile in 2010.

Finally, Figures 7a-d present the employment sector by father's education when the son was 15 to 29 (youth). For Egypt, having an illiterate father is strongly correlated with vulnerable employment in subsequent years 8 and even 14 years later for 1998 youth, as well as 6 years later for 2006 youth. Highly educated fathers on the other hand are associated with formal jobs in both public and private sectors even many years later. For Jordan in 2016, once again the association is not as strong as in Egypt, with the exception of formal private sector jobs that are highest among 2010 youth whose fathers were postsecondary educated or higher.

4.6. Earnings Vulnerability in Egypt and Jordan

To deepen our analysis further we also explore the labor *income* vulnerability of youth in Egypt and Jordan. Our data includes information on labor market earnings for all regular wage workers and we use that to explore the extent of low labor market earnings and how this low earnings status changes over time.

We use two benchmarks to determine low earnings: a relative benchmark based on being in the bottom earnings quintile; as well as an absolute benchmark based on comparing labor market earnings to a given low earnings line (henceforth LEL). These LELs are derived from official poverty lines (PLS) in CAPMAS (2013) and from the Jordanian DOS.
To calculate an individual LEL, the annual per capita PL is divided by 12.

Tables 2-5 reports results of earnings vulnerability by both the relative and absolute benchmarks for Egypt and Jordan by year, distinguishing between youth and non-youth. For all years and both countries, except Jordan 2016, youth are 2-3 times more likely to have earnings in the bottom quintile or to be low earners as compared to the LEL.

4.7. Identifying the Effects of Workers' Circumstances to Employment Outcomes

Next, we use multinomial logistic regressions to investigate the individual contributions of workers' circumstances. This method has previously been used by Assaad et al. (2014) to study occupational distribution of all workers in Jordan 2010, and by Assaad and Krafft (2014) to study school-to-work transitions in Egypt 2012. Our contribution is to study occupational distribution of youth and of non-youth on pooled survey waves. This allows us to estimate the changes in labor-market opportunities for young and older workers over time, as well as to mitigate model heteroskedasticity due to unobserved heterogeneity across households.[10]

Multinomial logistic regression estimates the probability that an individual will attain a particular value of a categorical dependent variable ($\Pr(y = j), j \in J$) – in our case type of employment – relative to the probability of a baseline option – here, being a discouraged worker out of labor force. This baseline is chosen as a natural state of recent graduates deciding whether to start job search. The regression takes values of explanatory variables (x), estimates outcome-specific coefficients on those explanatory variables (β_j) using maximum likelihood, and calculates probabilities of all possible outcomes ($\Pr(y = k), \forall k \in J$). The outcome with the highest estimated probability of occurring for an observation is classified as the predicted outcome. The estimable model is:

$$\Pr(y = j) = \frac{\exp(\beta_j x)}{\sum_{k \in J} \exp(\beta_k x)}$$

where individual-specific subscripts are omitted for clarity of presentation.

Table 6 reports coefficients of the main regressions estimated on pooled surveys, using both youth and non-youth workers, for each country. These coefficients, upon exponentiation and subtraction of 1, give the estimated changes in the probability of an outcome relative to the probability of being out of labor force, for a unit increase in the corresponding explanatory variables (a.k.a. odds, or relative risk ratios, $rrr = e^{\beta} - 1$). Positive coefficients imply an increase in the probability of an outcome relative to the baseline while negative coefficients imply a reduction.[11] In the following discussion, we will refer to these relative probabilities as odds, and we will omit mentioning they are relative to the baseline option.

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[10] For future robustness checks, these models may be estimated with random or fixed effect components to further limit the effects of latent heterogeneity across households. Moreover, dynamic models can be estimated using prior labor-market experience as a factor influencing current occupation.

[11] Finally worth noting, average marginal effect of x on the probability of an outcome j for an individual i (relative to the probability of the baseline outcome), π_{ij}, can be computed as: $\partial \pi_{ij}/\partial x_i = \pi_{ij}(\beta_j - \sum_{r \neq j} \pi_{ir}\beta_r)$.

The first explanatory variable, youth, confirms that both the Egyptian and the Jordanian youth have significantly lower odds to become employed in any type of employment compared to non-youth workers, particularly in formal employment or as employers. The odds of entering labor market and becoming unemployed are similar between youth and non-youth in Egypt, but higher among youth in Jordan. Workers' age is associated positively with the odds of any type of labor-market participation in both countries, but the effect is diminishing (since age squared carries negative coefficients). Women have lower odds of joining labor force, particularly private-sector employment (i.e., self-employed, informal, and employer categories in Table 6). The gender gaps in the odds of employment are substantially larger in Egypt than in Jordan.

Education has a consistently positive effect on the odds of higher-quality employment, but the effects differ between Egypt and Jordan. In Egypt, elementary and intermediate education has a small or even negative effect on the odds of workers' labor-market participation relative to no education. Secondary and tertiary education increase the odds, with higher education systematically increasing odds by a larger extent. The odds of attaining formal employment increase the most with the education level. In Jordan, on the other hand, even elementary and intermediate education have a strong positive effect on the odds of labor-market participation, but higher degrees of education are not associated with higher odds. Workers who can read and write have similar odds of labor-market participation as university graduates. Formal employment is the only category where higher education has consistently positive returns, so that university graduates have by far the highest odds of employment there.

These employment-odds returns to education are higher for women in Egypt (coefficients on the interaction terms are positive and rising with education level), except for the self-employment category. Finally worth noting, university graduates in both countries, both male and female, also have among the highest odds of staying unemployed (relative to being inactive), perhaps in search of private-formal or public employment.

In both countries, household wealth has a positive effect on workers' odds of becoming employers, and negative effect on the odds of attaining informal or irregular employment or being unemployed. The effect on the odds of landing formal employment, self-employment or unpaid family work is negative in Egypt, but positive in Jordan. Workers in larger households have slightly higher odds of joining labor force, but lower odds of finding employment (except for the self-employment category, where the effect is zero or positive), suggesting that they are driven to the labor force to provide for their families. Similarly, workers in female-headed households, have higher odds of joining labor force, but lower odds of finding formal employment. Interestingly, however, these workers have higher odds of landing informal employment or becoming employers themselves. One possible explanation is that female-headed households are at both tails of the distribution of economic outcomes, with some female-headed

households struggling to meet ends in informal/irregular employment, and others managing businesses using remittances from spouses residing away.

Surprisingly, in both countries, the highest level of education among household members, and father's education, are associated negatively with the odds of any type of labor market participation (after controlling for father's employment status when workers were 15, and other household characteristics). Father's employment status has strong effects of the expected signs and magnitudes on the odds of children's employment status. There is evidence of intergenerational transmission of employment status, since fathers' employment type has the greatest effect on the odds of the same employment type of their children. Children of inactive (employer, or self-employed/unpaid, respectively) fathers have the highest odds of remaining inactive or unemployed (employer, or self-employed/unpaid, respectively).

Across Egyptian and Jordanian regions, urban workers have significantly higher odds of being unemployed, and somewhat higher odds of working informally, being self-employed/unpaid or employing others. This suggests that the availability of formal jobs relative to the pool of local workers aspiring to get them, is lower in urban markets. The unsuccessful urban aspirants remain unemployed or accept a more precarious form of employment (or leave).

Finally, time indicators show that workers' odds of landing formal jobs fell, and those of remaining out of labor force increased over time in both countries, pointing to deteriorating labor market conditions. While the odds of Egyptian workers becoming self-employed, informal/irregular or employers increased during 1998-2012, and the odds of being unemployed fell, Jordanian workers saw their odds of employment fall across employment categories, and odds of remaining unemployed rise. This suggests that recent economic conditions and refugee crisis in Jordan have resulted in swelling numbers of those involuntarily unemployed and economically discouraged.[12]

5. Concluding Remarks and Future Extensions

This paper has defined youth vulnerabilities in Egypt and Jordan terms of employment outcomes in the form of both sector of employment and earnings. We took advantage of a relatively long panel of data that allows us to study outcomes of youth in 1998 and 2006, and how these outcomes have changed over time, until 2012, in Egypt and similarly for Jordan between 2010 and 2016. We found that youth in both Egypt and Jordan were severely disadvantaged in terms of employment sectors with most youth ending up in vulnerable jobs such as being self-employed, an unpaid family worker, an irregular wage worker or in the informal private sector. These jobs all share undesirable job characteristics such as lack of contract, absence of benefits

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[12] Tables in the appendix report on robustness checks where the regressions are run by year, or on youth and non-youth samples separately. Figures in the appendix plot the cubic-splines of probabilities of all employment outcomes for various demographic groups, by age, years of schooling or household wealth score.

such as health and social insurance, and paid leaves. We also found that youth jobs are much more likely to be associated with low wage earnings and this likelihood is rising over time especially in Egypt.

Dynamic analysis confirms that youth who start out in the labor market in a vulnerable job are unlikely to move to a better quality job over time. Family wealth and father's education were important determinants of employment outcomes and these associations persist even after a long period of work experience. Multinomial probability regressions confirm that youth workers are less likely to attain decent employment than non-youth workers, particularly in formal employment.

The results of this study highlight the fact that even in wage employment, jobs can be informal, low-productivity, and low-pay. It is thus important not to focus exclusively on unemployment and self-employment rates as youth employment indicators. If the aim of youth employment policies is to secure decent work for young people, then productivity, earnings, social protection, and aspects such as occupational safety and health and job security all need to be considered.

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Figure 1

The region's youth is wasting away

Wasted youth
Youth* population and unemployment in the Arab world

Total population 2016, m: 100 / 50 / 10

Sources: ILO; World Bank; US Census Bureau

*15- to 24-year-olds

Figure 2a

Employment Status and Sector by age group in 1998

Males (non students)

Females (non students)

Age 30 to 59

Youth: 15 to 29

percent

Graphs by Age Group in 98

Figure 2b

Employment Status and Sector by age group in 2006

Figure 2c

Employment Status and Sector by age group in 2012

Figure 2d: Jordan 2010
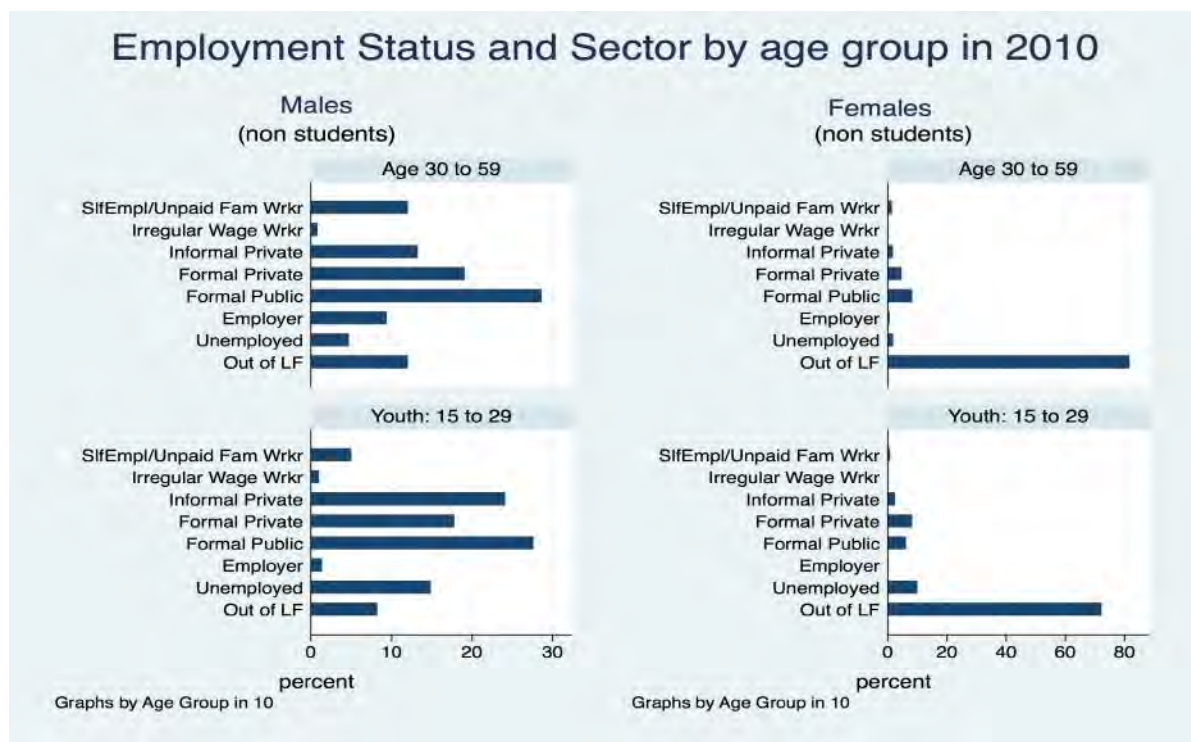
Figure 2e: Jordan 2016
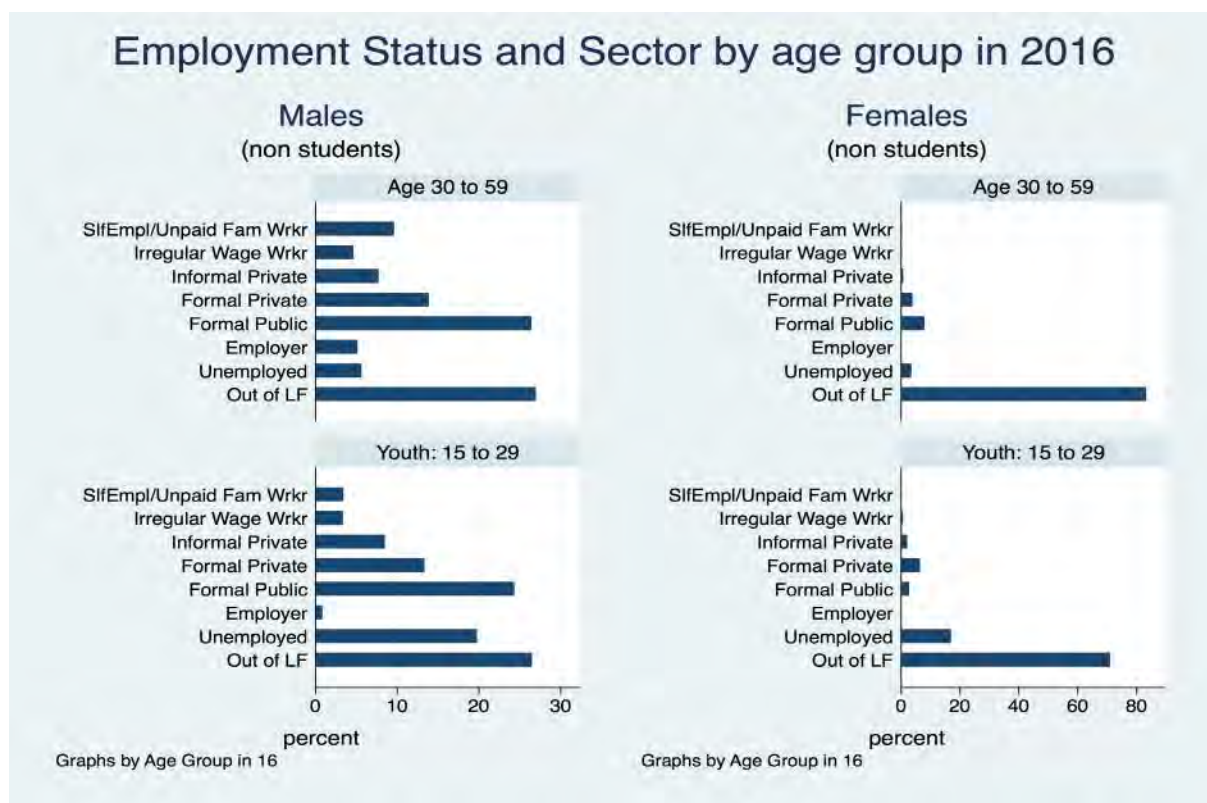
Figure 3a: Transitions between employment sector, Egypt 1998-2006, for 1998 Youth Males (nonstudents)
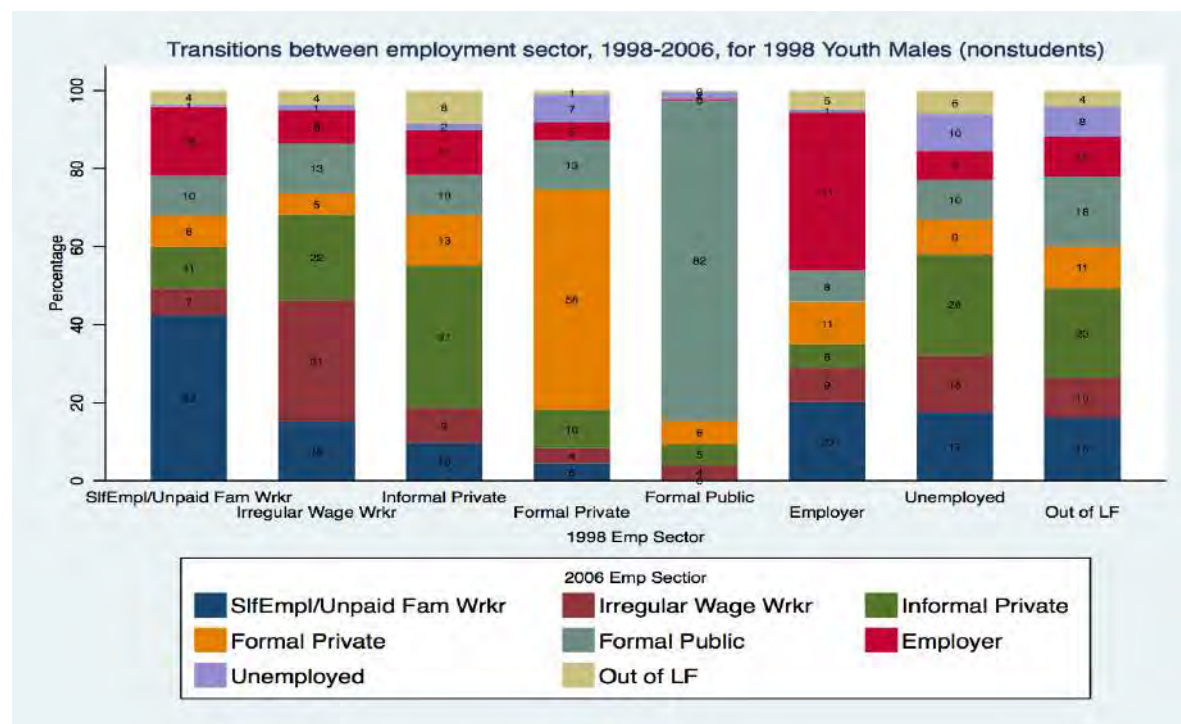
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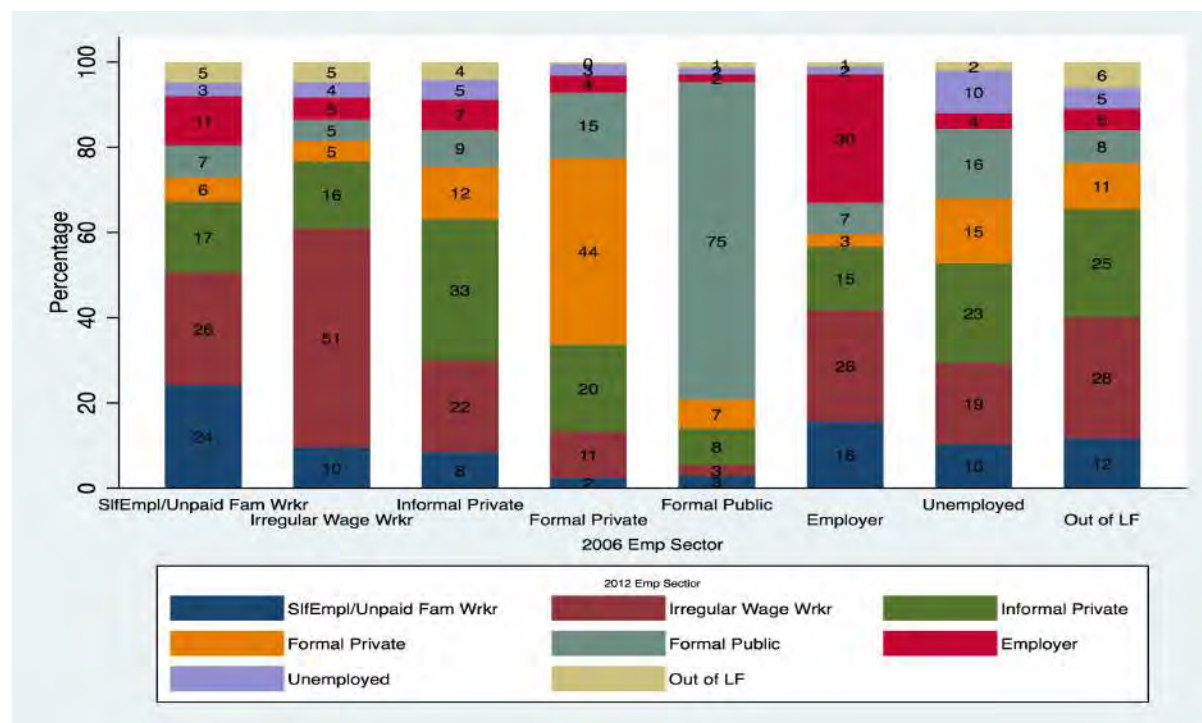
Figure 3c: Transitions between employment sector, Egypt 1998-2012, for 1998 Youth Males
(nonstudents)
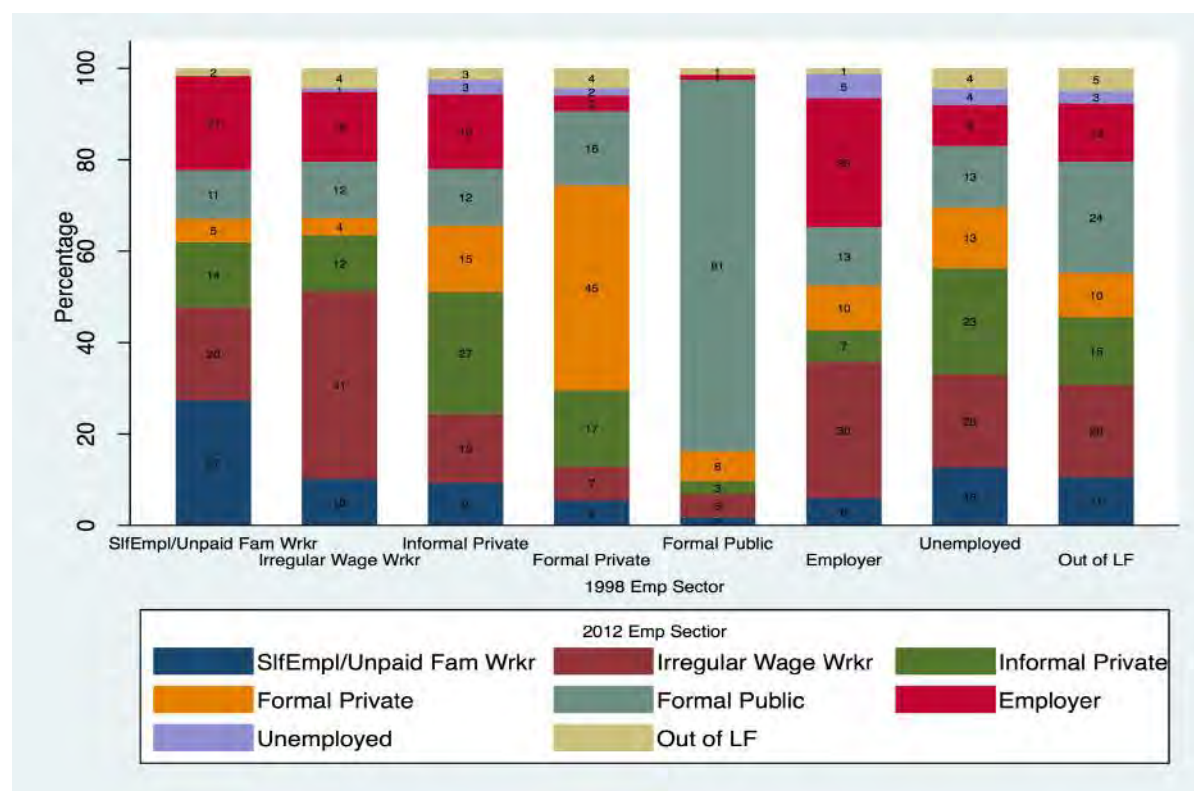
Figure 3d: Jordan 2010 to 2016: Transitions between employment sector, 2010-2016, for 2010 Youth
Males (nonstudents)
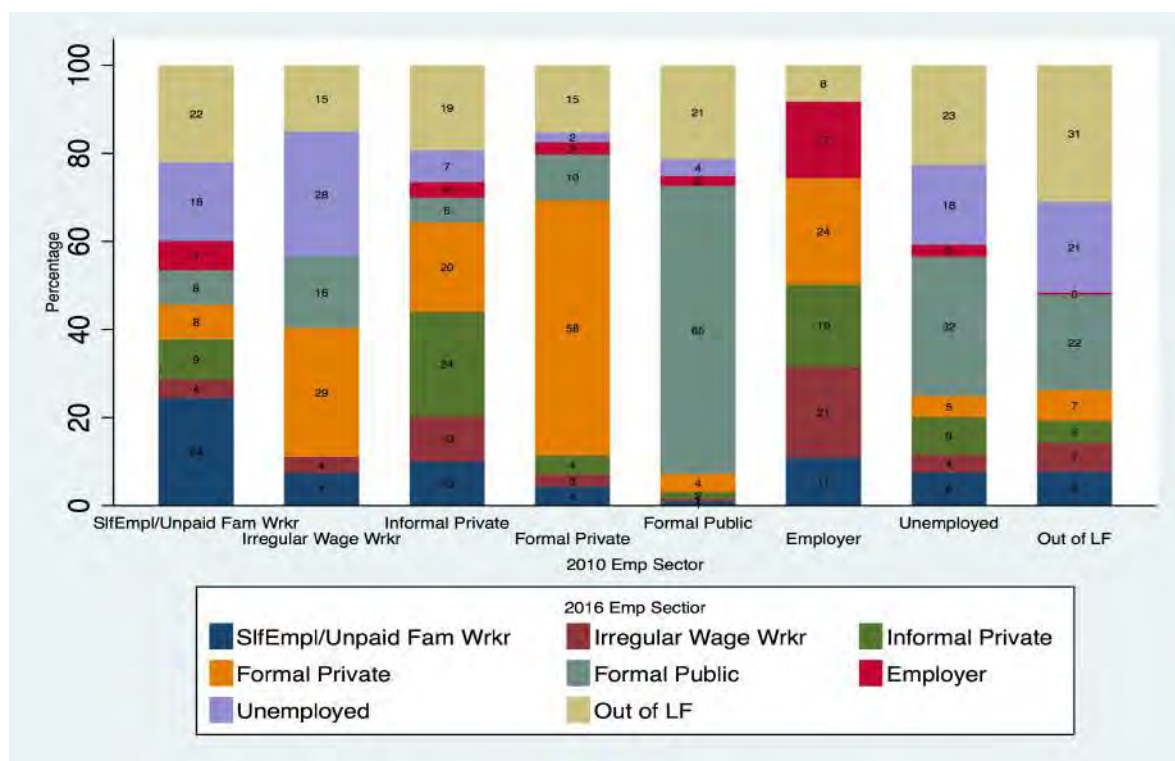
Figure 4a: Egypt 1998 Employment Sector by 1998 Wealth Quintiles, for 1998 Youth Males
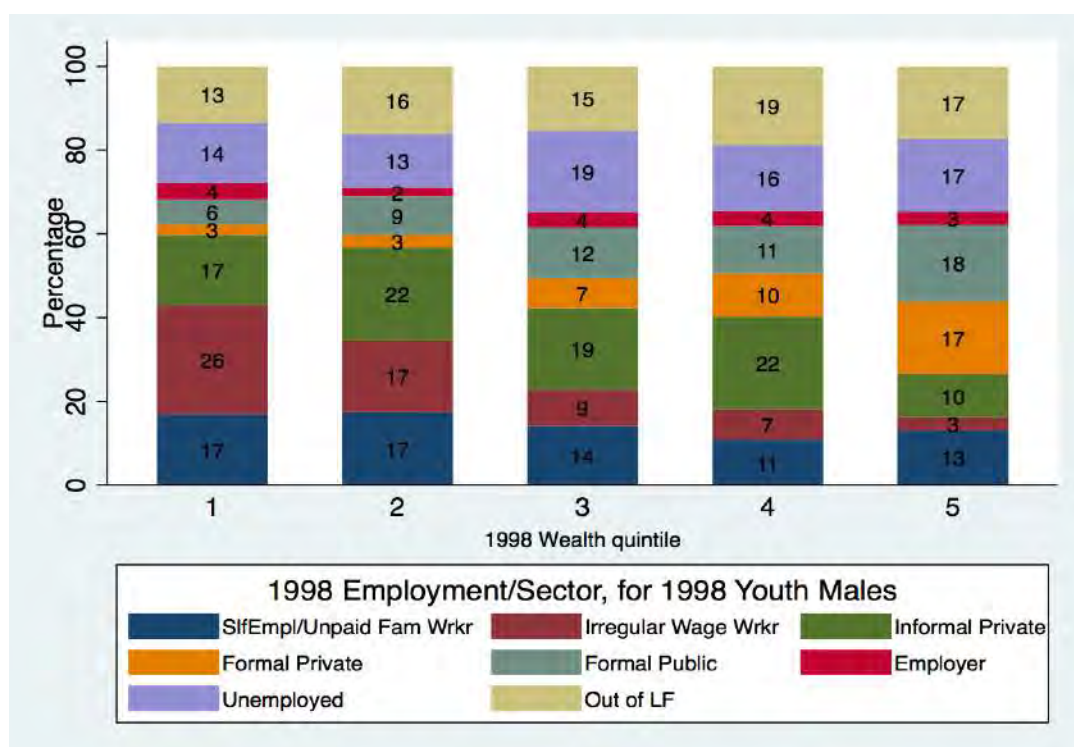
Figure 4b: Egypt 2006 Employment Sector by 2006 Wealth Quintiles, for 2006 Youth Males

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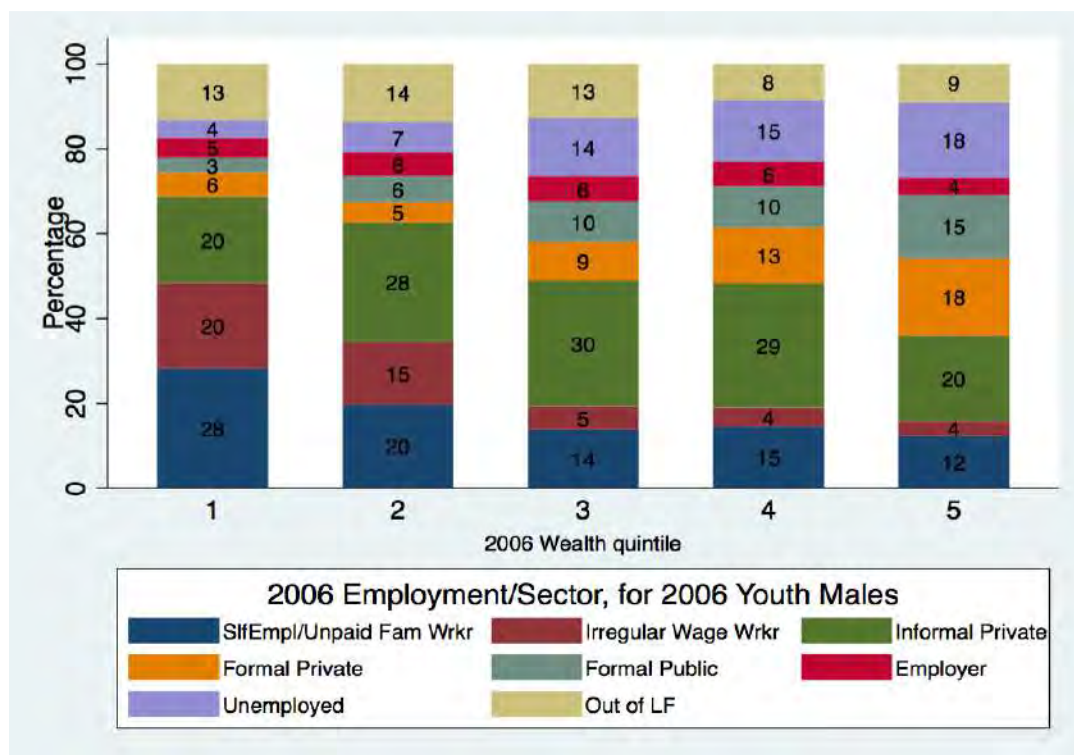
Figure 4c: Egypt 2012 Employment Sector by 2012 Wealth Quintiles, for 2012 Youth Males
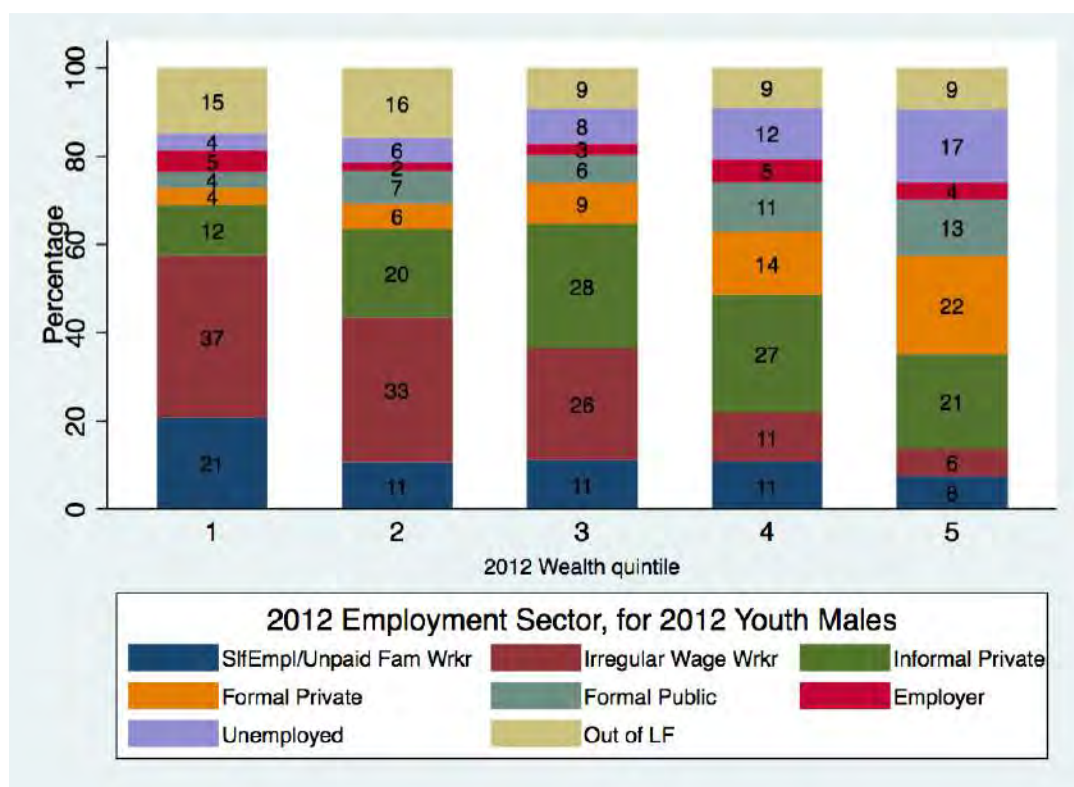
Figure 4d: Jordan 2010 Employment Sector by 2010 Wealth Quintiles, for 2010 Youth Males
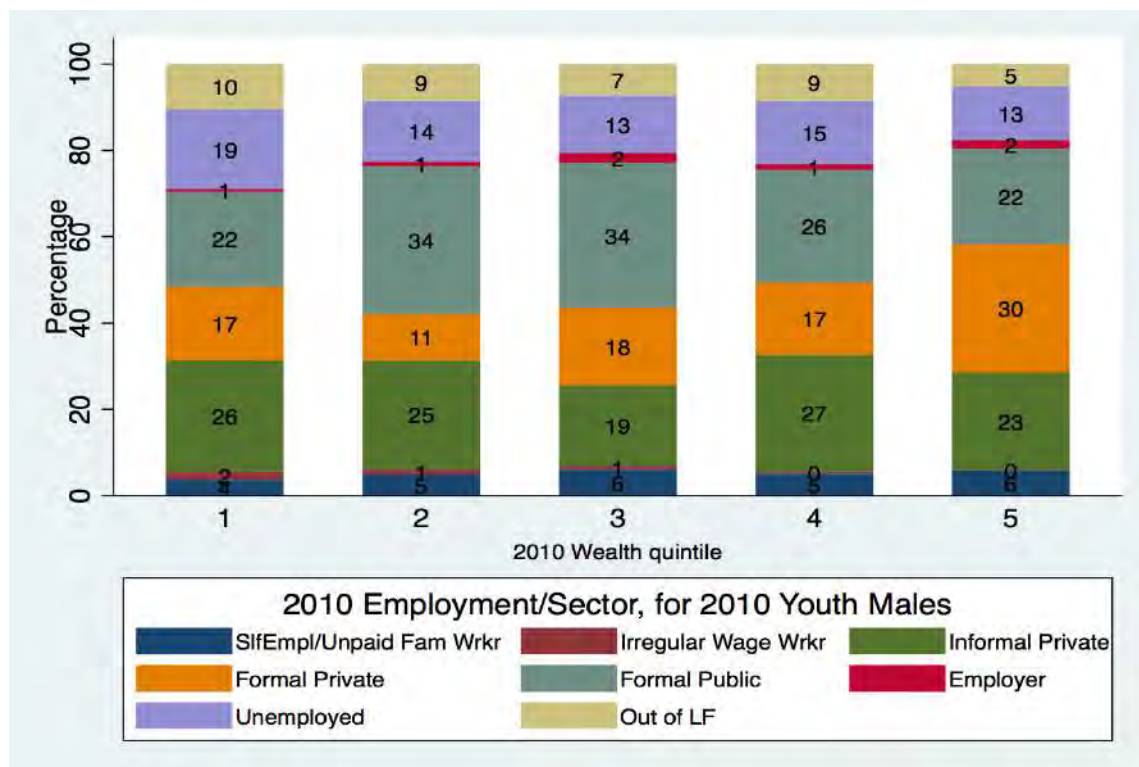
Figure 4e: Jordan 2016 Employment Sector by 2016 Wealth Quintiles, for 2016 Youth Males
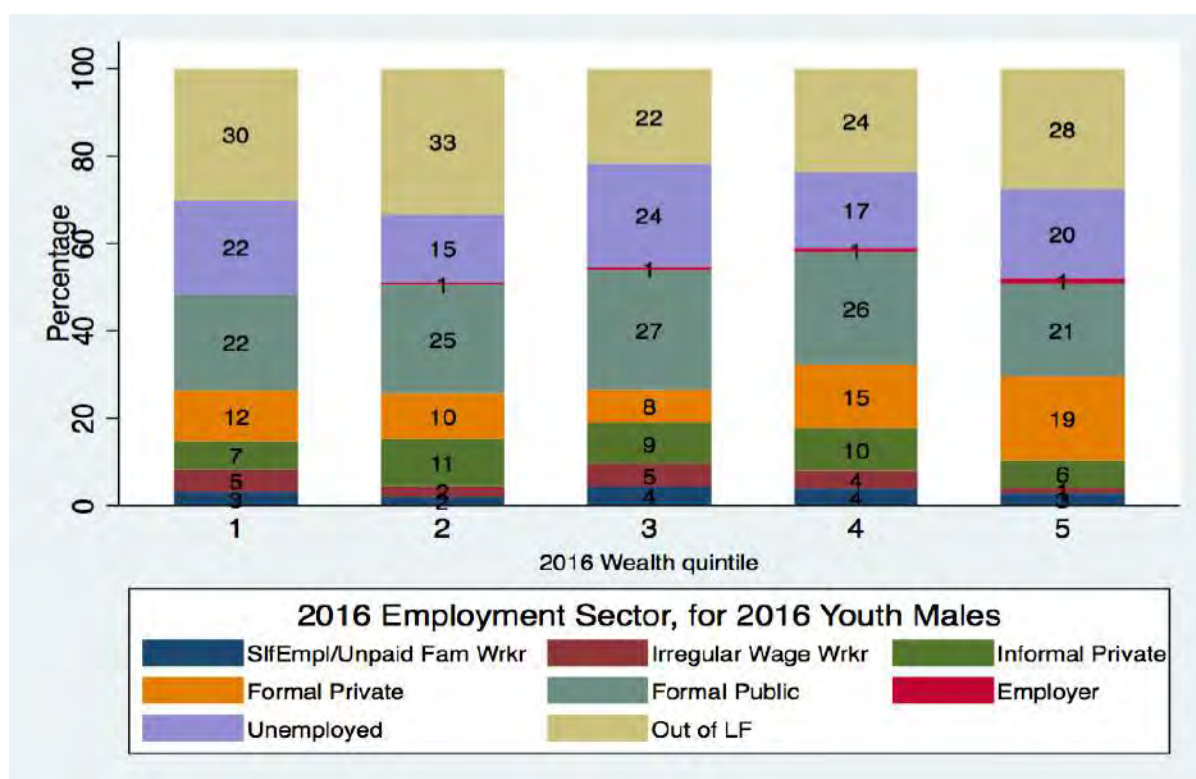
Figure 5a: Egypt 1998 Employment Sector by 1998 Father's Education, for 1998 Youth Males
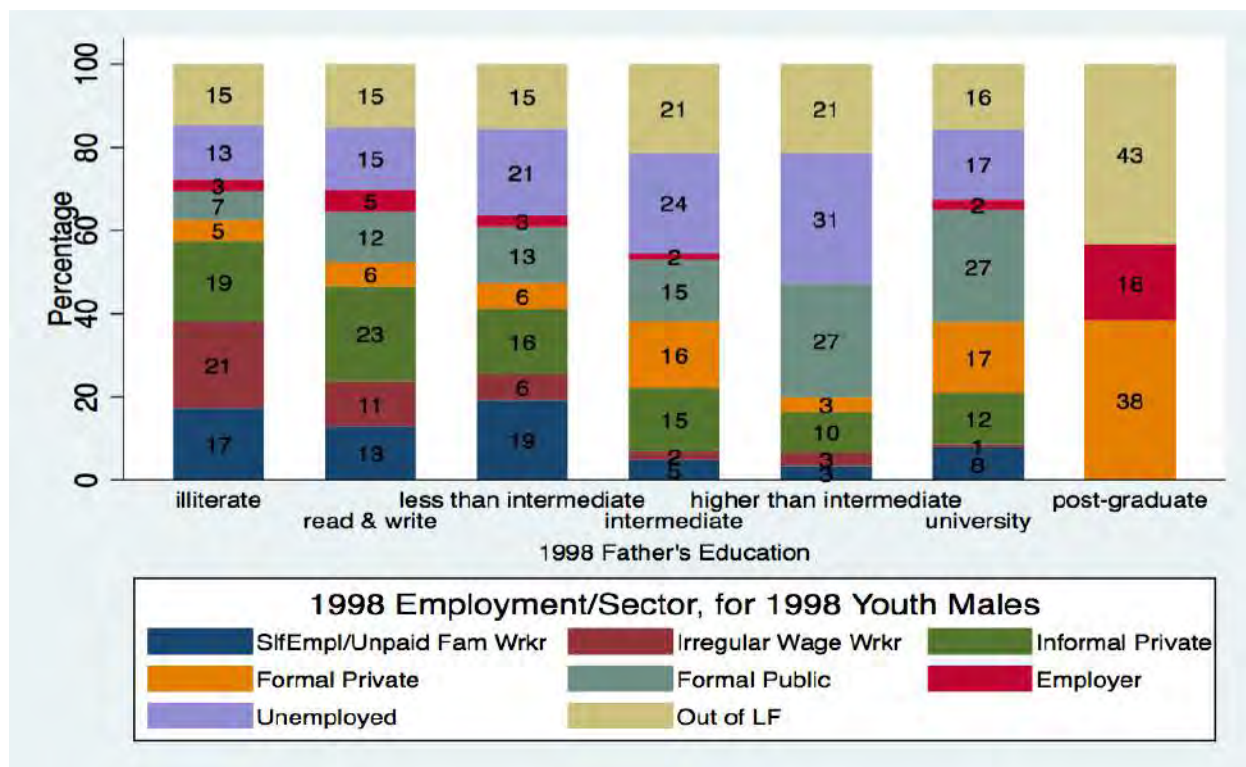
Figure 5b: Egypt 2006 Employment Sector by 2006 Father's Education, for 2006 Youth Males
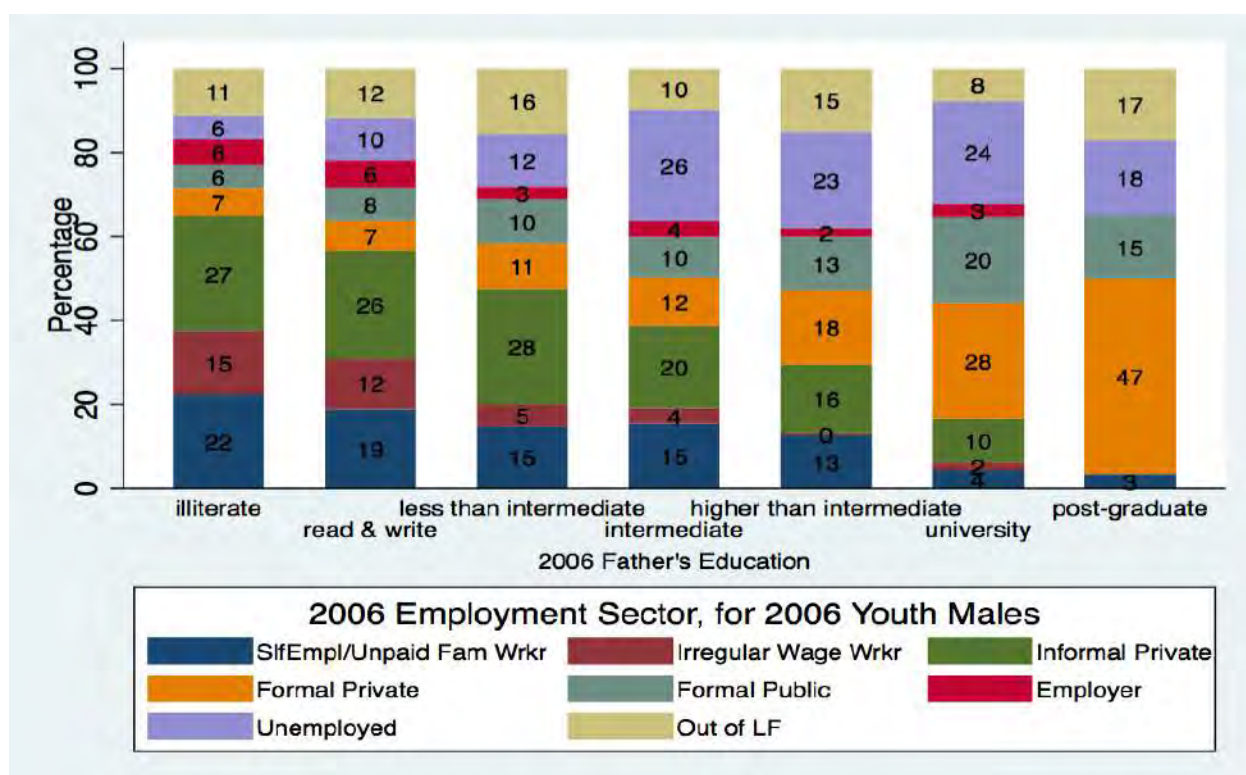
Figure 5c: Egypt 2012 Employment Sector by 2012 Father's Education, for 2012 Youth Males
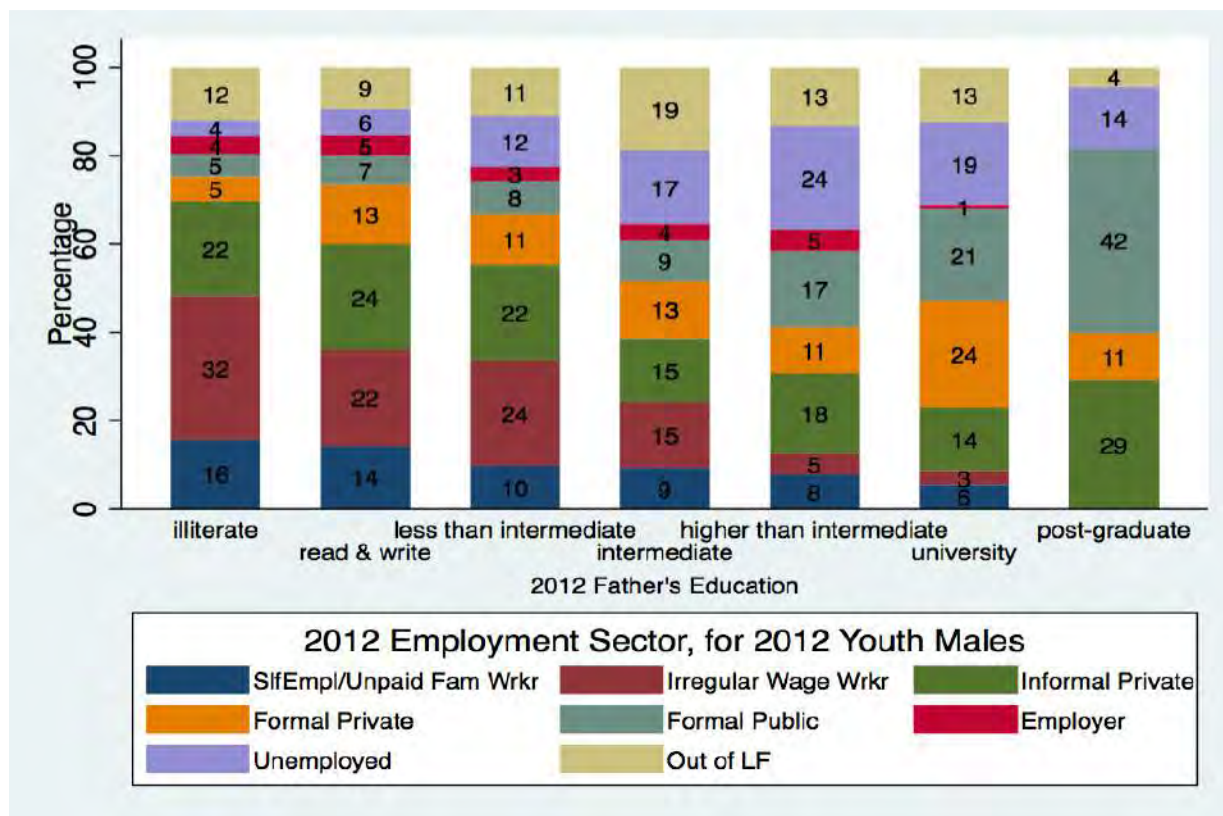
Figure 5d: Static Cross Vulnerabilities: Jordan 2010 employment outcomes by 2010 father's education, for 2010 youth
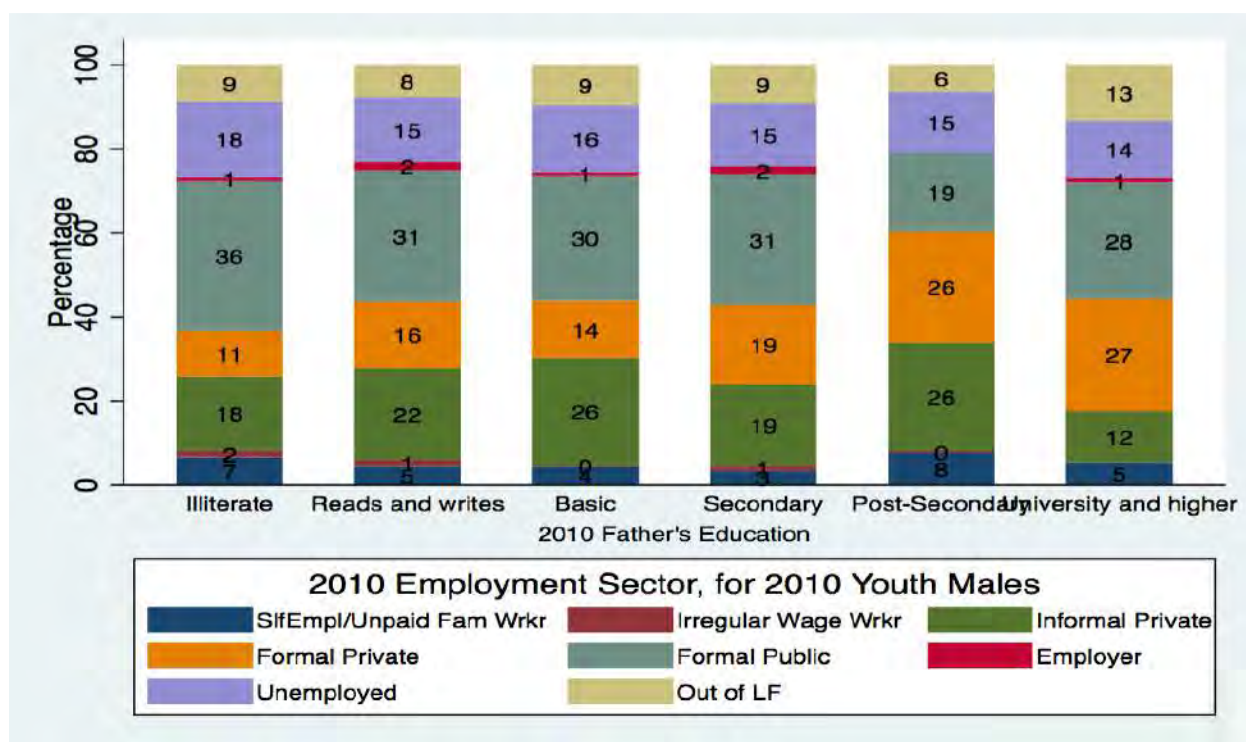
Figure 5e: Static Cross Vulnerabilities: Jordan 2016 employment outcomes by 2016 father's education, for 2016 youth
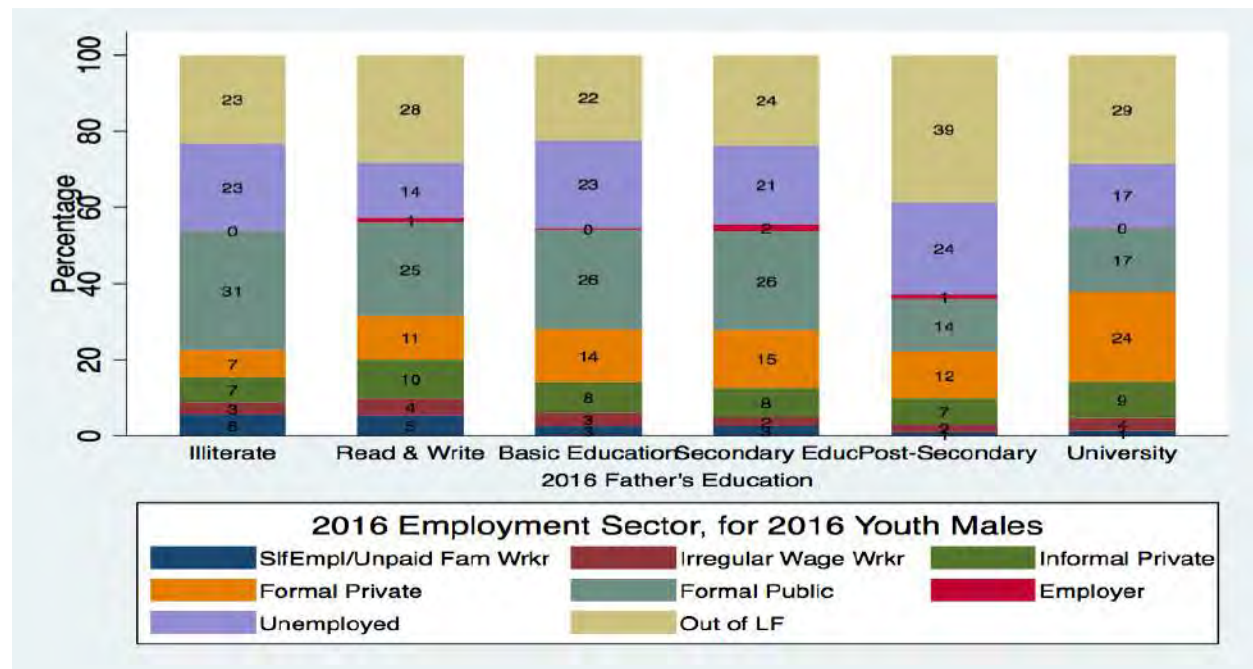
Figure 6a: Egypt 2006 Employment Sector by 1998 Wealth Quintile, for 1998 Youth
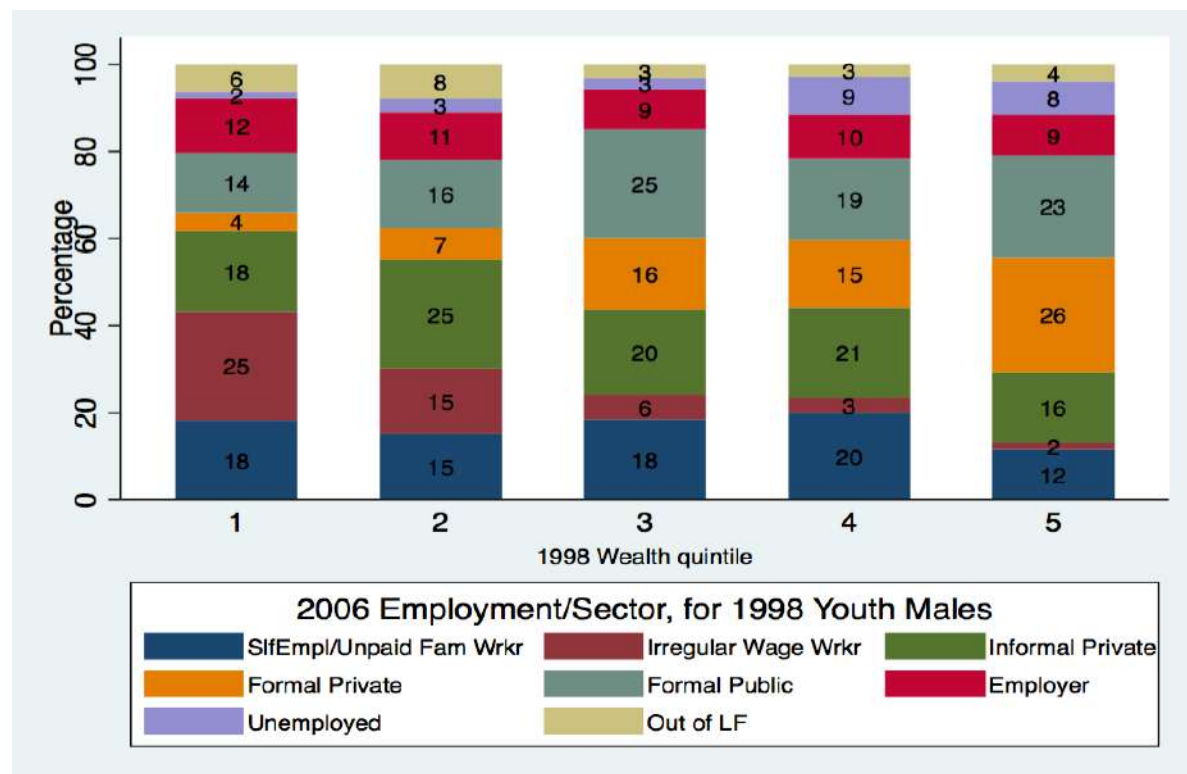
Figure 6b: Egypt 2012 Employment Sector by 1998 Wealth Quintile, for 1998 Youth
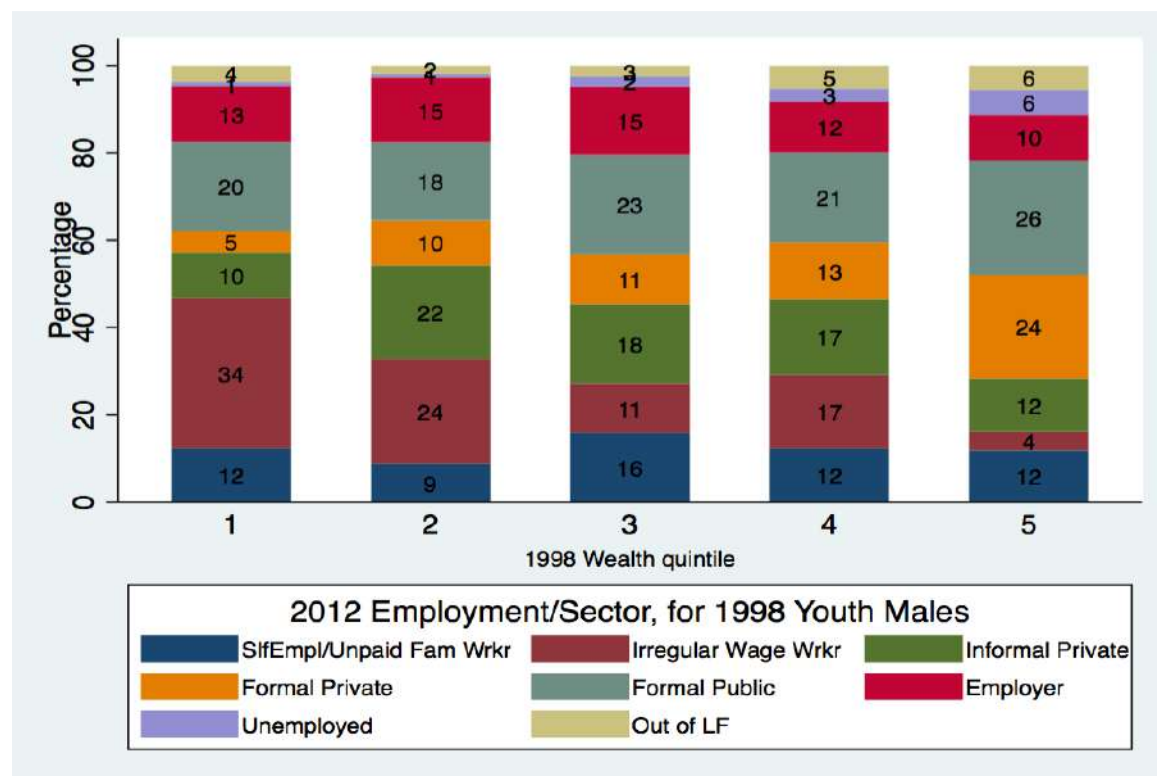
Figure 6c: Egypt 2012 Employment Sector by 2006 Wealth Quintile, for 2006 Youth
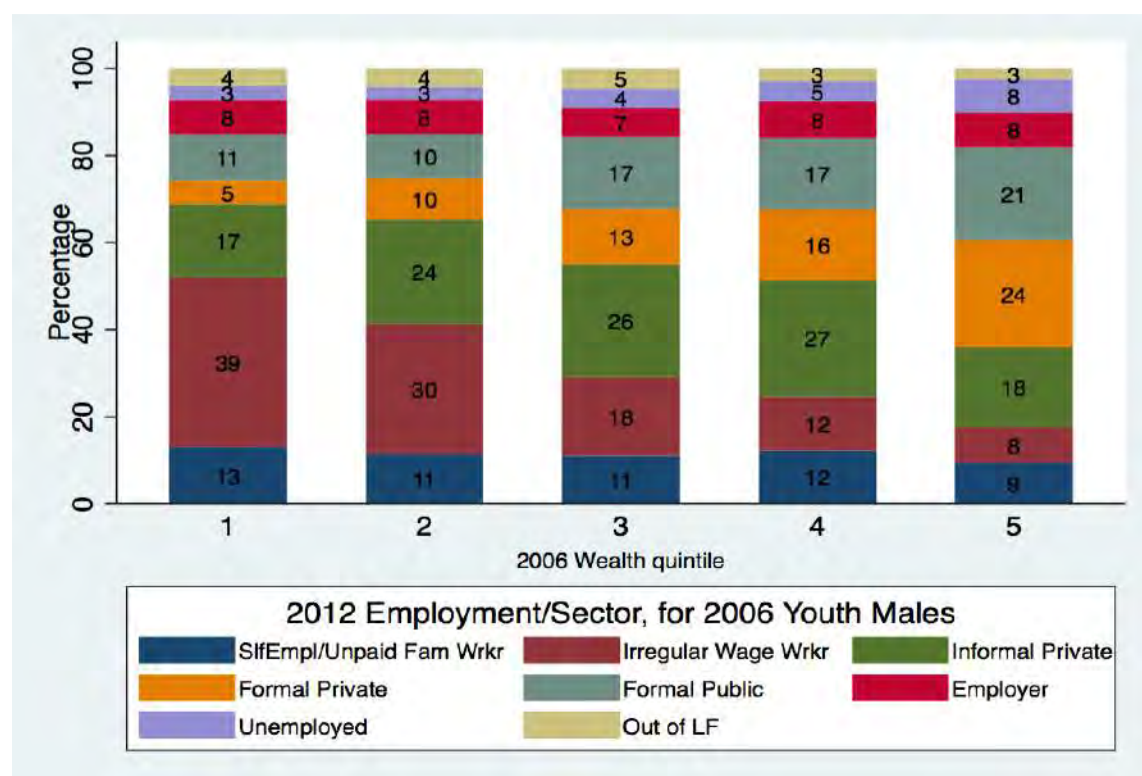
Figure 6d: Jordan 2016 Employment Sector by 2010 Wealth Quintile, for 2010 Youth
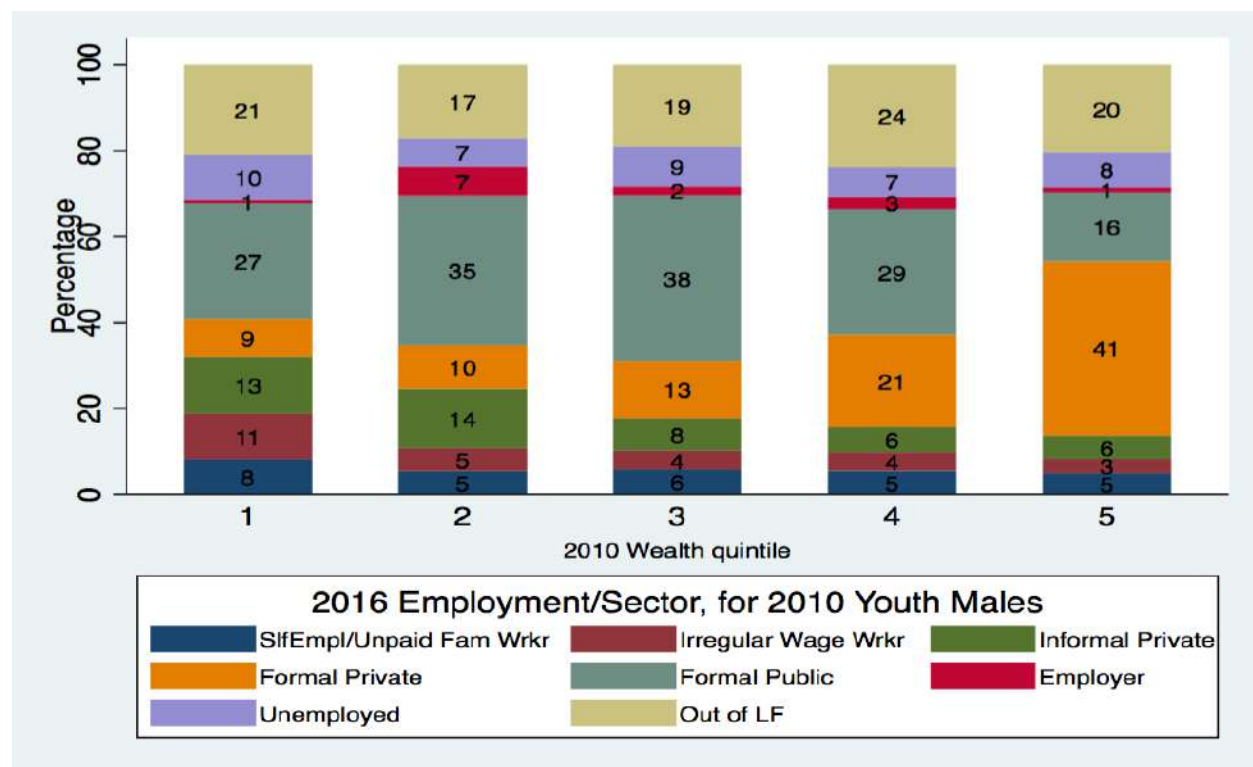
Figure 7a: Egypt 2006 Employment Sector by 1998 Father's Education, for 1998 Youth
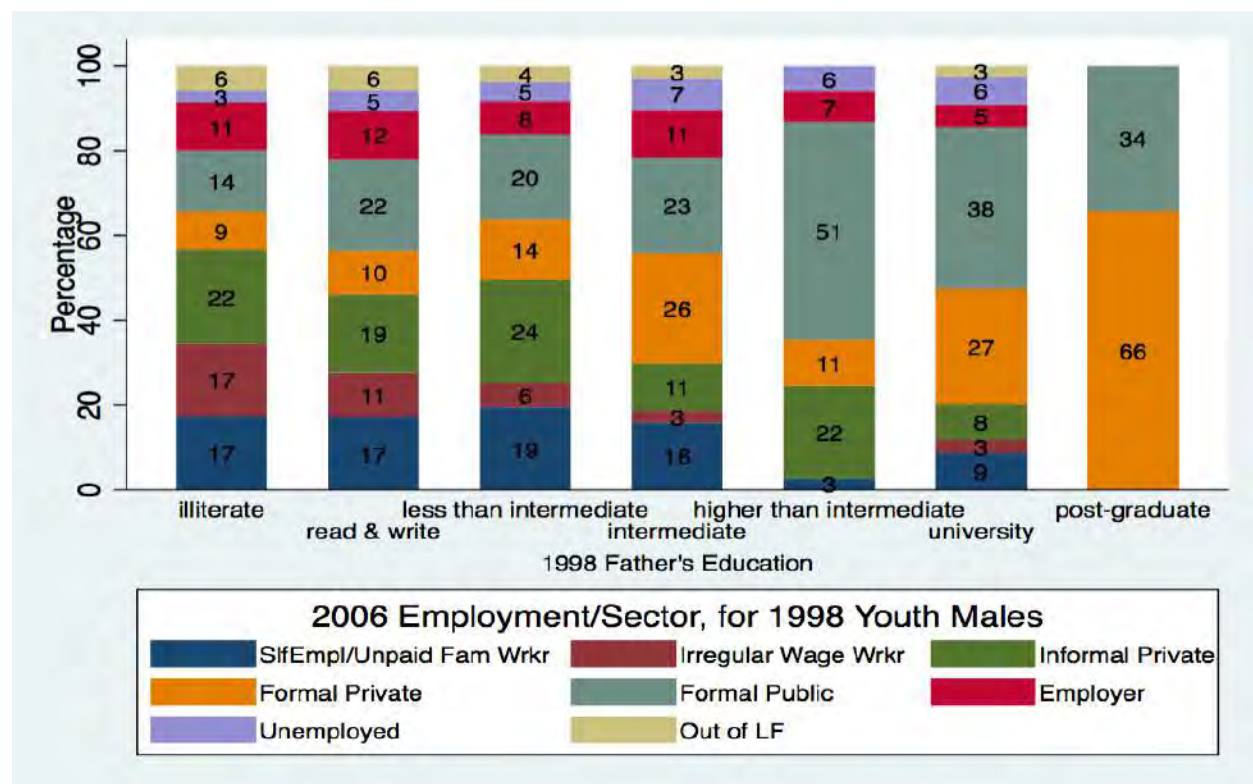
Figure 7b: Egypt 2012 Employment Sector by 1998 Father's Education, for 1998 Youth:
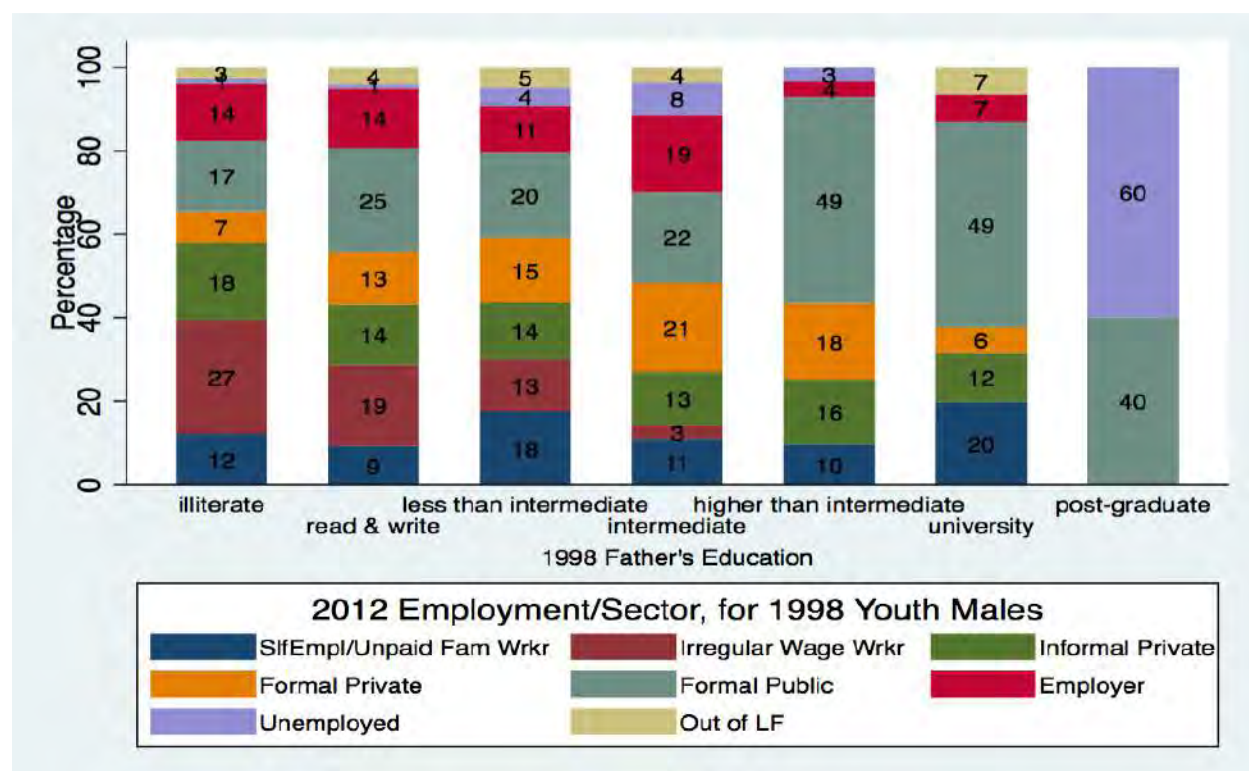
Figure 7c: Egypt 2012 Employment Sector by 2006 Father's Education, for 2006 Youth
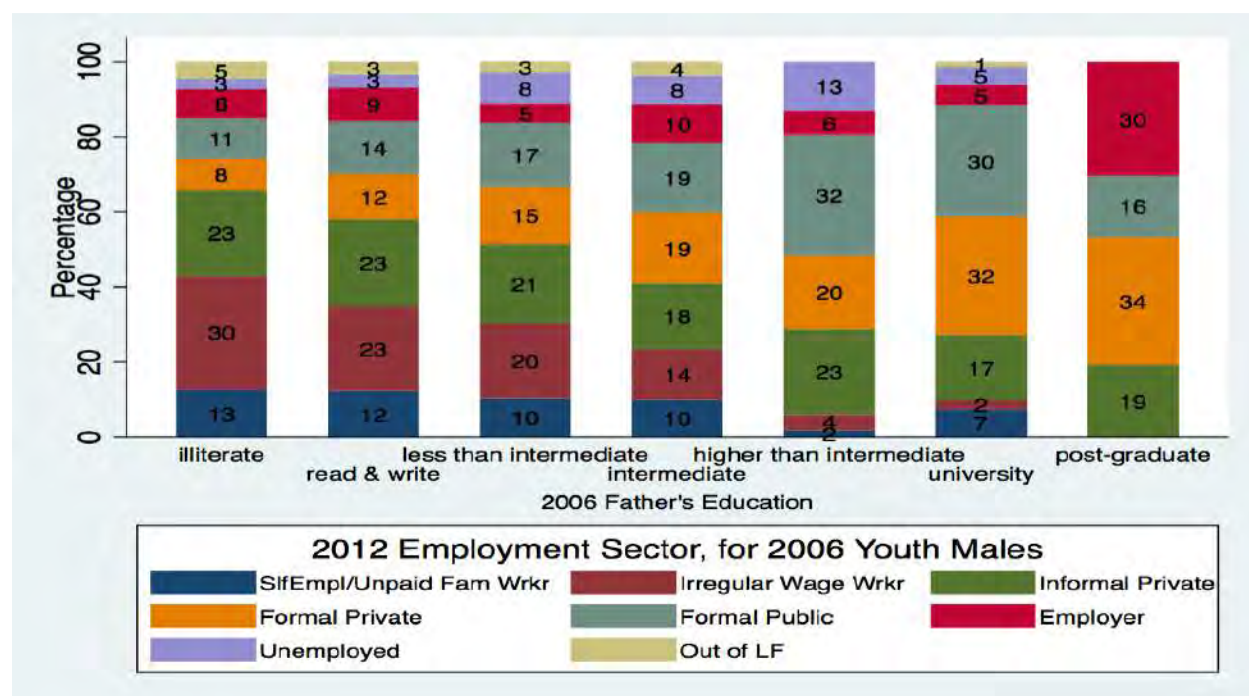
Figure 7d: Jordan 2016 Employment Sector by 2010 Father's Education, for 2010 Youth
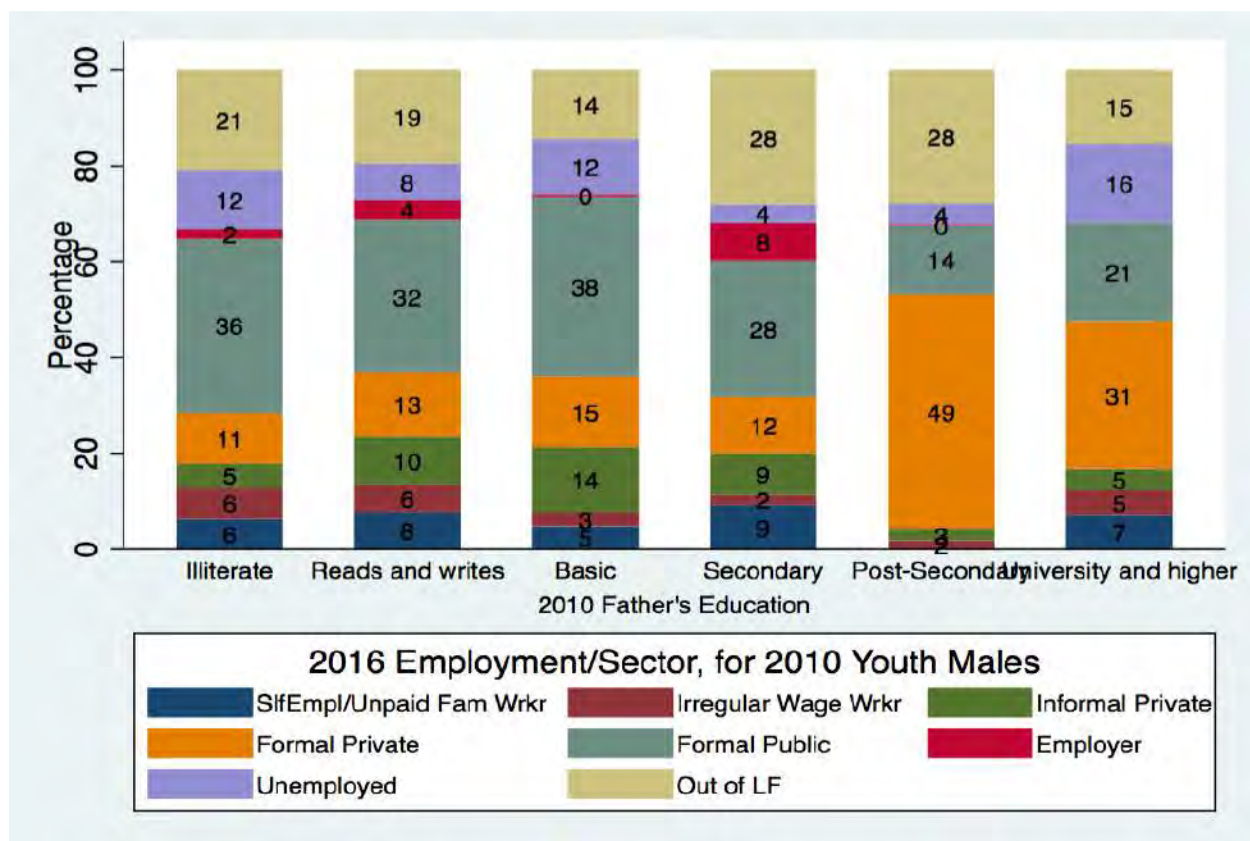
Table 1a: Summary Statistics of 1998 Youth in Egypt, in 1998 and Subsequent Years

Age Grp in 1998	1998			2006			2012		
	Age 30 to 59	Youth: 15 to 29	Total	Age 30 to 59	Youth: 15 to 29	Total	Age 30 to 59	Youth: 15 to 29	Total
	%	%	%	%	%	%	%	%	%
Educational Attainment (7 Categories, age 6+)									
Illiterate	36.7	14.7	26.1	39.7	15.1	28	41.6	16.8	29.3
Reads&Writes	11.1	3.8	7.6	8	3.6	5.9	5.6	3.8	4.7
Less than Inte	15.2	35.9	25.2	15	14.2	14.6	15.6	15.2	15.4
Intermediate	17.7	35	26.1	19.6	39.7	29.2	20.8	38.4	29.6
Above Interme	5.3	4.1	4.7	3.9	5.1	4.4	3	4.4	3.7
University	13.2	6.4	9.9	13.1	22	17.3	12.5	20.4	16.5
post-graduate	0.8	0.1	0.5	0.7	0.4	0.5	0.8	1	0.9
Work status during ref. 3-month, market def. (search is not required)									
Employed	58.1	30.1	44.6	57.9	55.3	56.6	52.9	62.6	57.8
Unemployed	1.9	11.2	6.4	0.6	9.5	4.9	0.6	5.8	3.3
Out of Labor F	40.1	58.7	49.1	41.5	35.2	38.5	46.6	31.6	38.9
Employment status of prim. Job (ref. 3-month)									
wage worker	62.3	58	60.8	56.6	63.1	59.6	61.9	70.5	66.6
employer	9.5	2.8	7.2	15.3	7.8	11.8	14	9.5	11.5
self employed	8.4	3.5	6.7	10	8.2	9.2	11.9	9.3	10.5
unpaid family	19.8	35.7	25.2	18.1	20.8	19.3	12.1	10.7	11.4
Economic sector of prim. Job (ref. 3-month)									
government	35.5	13.8	28.1	36	19	28.1	41.6	25.3	32.7
public enterpr	8.1	2.7	6.3	6.4	3.9	5.2	3.7	3.6	3.6
private	55.3	82.5	64.6	56.2	75.2	65.1	53.3	68.8	61.7
jopint-venture	0.8	0.7	0.8	1.2	1.4	1.3	0.8	1.8	1.3
foreign	0.1	0.2	0.1	0	0.1	0	0	0.1	0
other	0.2	0.2	0.2	0.2	0.3	0.3	0.6	0.5	0.6
Occup. of prim. job (1-digit based on ISCO88, ref. 3-month)									
Managers	12.3	2.9	9.1	14.8	5.4	10.4	15.5	8	11.4
Professionals	17	11.4	15.1	14.8	15.4	15.1	16.2	17.1	16.7
Technicians ar	6.3	2.7	5.1	10.4	8.1	9.3	13.3	8.6	10.7
Clerical suppo	8.6	3.1	6.7	5.3	3.3	4.4	4.7	2.3	3.4
Service and sa	9.5	14.1	11.1	10.1	15.1	12.4	7.1	13.4	10.5
Skilled agricul	26.8	37.1	30.3	26.5	23.6	25.2	22.1	16.7	19.2
Craft and relat	11.8	21.9	15.3	10.5	19	14.5	8.5	16.8	13
Plant and mac	5.3	3.8	4.8	5.7	7.2	6.4	5.7	10.8	8.5
Elementary oc	2.4	3	2.6	1.9	2.8	2.3	7	6.3	6.6
Usual Job Economic Activity (1-digit, 1986-CODE INDEX, used in 88/98)									
Agri	27.8	37.3	31.1	27.6	24.3	26.1	22.2	17.1	19.5
Mining	0.4	0.2	0.3	0.3	0.4	0.3	0.1	0.2	0.2
Manufact	12.5	15.2	13.4	11.3	14.7	12.9	9.4	13.8	11.8
Elect	1.3	0.3	1	1.6	0.6	1.2	2.2	1.1	1.6
Const	4.5	8.5	5.9	3.8	8.5	6	4.4	9.5	7.2
Trade	11.3	15.4	12.7	12.3	17.5	14.7	12.8	16.6	14.9
Trans	6.3	4	5.5	5.6	7	6.2	4.8	7.7	6.4
Finance	2.5	1.3	2.1	1.4	1	1.2	1.4	1.1	1.2
Serv	33.3	17.8	28	36.1	26	31.4	42.9	32.8	37.4
region_HIECS_98									
Metropolitan (	33.8	29.9	31.9	30.8	27.2	29.1	26.7	21.4	24.1
Urban Lower	16.7	15.7	16.2	16.9	15.1	16	16.1	14.2	15.2
Rural Lower	18.8	21.3	20	19.2	22.5	20.8	21.2	25.9	23.5
Urban Upper	17.3	17.2	17.3	18.7	18.6	18.7	19.4	19.5	19.4
Rural Lower	13.4	15.9	14.6	14.4	16.7	15.5	16.6	19	17.8
Total	100	100	100	100	100	100	100	100	100
Vulnerable Employment (current)	15.3	17.7	16.5	13.9	27.3	20.3	13.9	28	21

Table 1b: Summary Statistics of 2006 Youth in Egypt, in 2006 and Subsequent Years

	2006			2012		
Age Grp in 2006	Age 30 to 59	Youth: 15 to 29	Total	Age 30 to 59	Youth: 15 to 29	Total
	%	%	%	%	%	%
Educational Attainment (7 Categories, age 6+)						
Illiterate	35.4	13.8	24.3	39.4	14.7	26.7
Reads&Write	7.2	3.1	5.1	5.2	3	4.1
Less than Inte	14.1	30.2	22.4	15	14.4	14.7
Intermediate	24.2	38.6	31.6	23.7	43.6	33.9
Above Interm	4.3	2.9	3.6	3.6	3.9	3.8
University	14.2	11.3	12.7	12.3	19.6	16
post-graduate	0.6	0.1	0.4	0.8	0.8	0.8
Work status during ref. 3-month, market def. (search is not required)						
Employed	63.8	35.8	49.3	56.8	51.4	54
Unemployed	1.6	8.4	5.1	1.4	9.1	5.4
Out of Labor I	34.6	55.8	45.6	41.8	39.5	40.6
Employment status of prim. Job (ref. 3-month)						
wage worker	57.2	54.3	56.1	60.8	69.7	65.2
employer	13.6	5.2	10.4	13.4	6.4	9.9
self employed	9.8	5.9	8.3	11.7	7	9.4
unpaid family	19.4	34.6	25.3	14.1	17	15.5
Economic sector of prim. Job (ref. 3-month)						
government	31.2	9.3	22.7	35.5	16.2	26
public enterpr	5.5	2.3	4.2	3.4	3.1	3.3
private	62.1	87.1	71.8	59.9	78.8	69.2
jopint-venture	0.9	1.1	1	0.8	1.6	1.2
foreign	0	0.1	0	0	0.1	0
other	0.3	0.1	0.2	0.4	0.3	0.3
Occup. of prim. job (1-digit based on ISCO88, ref. 3-month)						
Managers	10.1	2.9	7.3	11.5	4.7	8.1
Professionals	15	7.9	12.3	15.7	13.2	14.5
Technicians a	10.1	5	8.1	11.5	6.7	9.1
Clerical suppc	4.6	2.3	3.7	3.6	2.1	2.9
Service and sa	10.8	14.1	12.1	7.3	13.3	10.3
Skilled agricu	29.3	37.7	32.6	26.4	24.3	25.3
Craft and rela	12.1	20.5	15.4	10.2	19.6	14.8
Plant and ma	6	6.3	6.1	7.2	10.3	8.8
Elementary o	2	3.3	2.5	6.6	5.7	6.1
Usual Job Economic Activity (1-digit, 1986-CODE INDEX, used in 88/98)						
Agri	30.3	38	33.3	26.5	24.6	25.6
Mining	0.2	0.3	0.2	0.1	0.2	0.2
Manufact	11.1	14.2	12.3	9.4	13.1	11.2
Elect	1.3	0.4	1	1.8	1.2	1.5
Const	5.5	9.1	6.9	5.9	12.4	9.1
Trade	11.4	14.9	12.8	12	15.6	13.8
Trans	6.4	6.1	6.3	5.8	6.9	6.4
Finance	1.3	0.3	1	1.2	0.6	0.9
Serv	32.4	16.7	26.3	37.1	25.4	31.3
region_HIECS_06						
Metropolitan	28.2	24	26	23	19.5	21.2
Urban Lower	13.5	13	13.3	13.2	12.3	12.7
Rural Lower	24.6	25.9	25.2	27.6	28.3	27.9
Urban Upper	15.4	14.8	15.1	16	15.2	15.6
Rural Lower	18.2	22.3	20.3	20.2	24.7	22.5
Vulnerable Employment (current)	20.2	23.7	22	18.6	29.7	24.3
Vulnerable Employment (usual)	20.6	24.2	22.5	19	30.3	24.8

Table 1c: Summary Statistics of 2012 Youth in Egypt

Age Grp in 2012	2012		
	Age 30 to 59	Youth: 15 to 29	Total
	%	%	%
Educational Attainment (7 Categories, age 6+)			
Illiterate	32	11.9	22
Reads&Writes	4.6	2.1	3.3
Less than Interr	14.5	30.2	22.2
Intermediate	29.3	40.2	34.7
Above Intermec	3.6	2.4	3
University	15.2	12.8	14
post-graduate	0.9	0.5	0.7
Work status during ref. 3-month, market def. (search is			
Employed	61	35.2	48.2
Unemployed	3	7.1	5
Out of Labor Fo	36	57.7	46.7
Employment status of prim. Job (ref. 3-month)			
wage worker	65	65.5	65.2
employer	11.3	3.9	8.5
self employed	9.7	5.8	8.3
unpaid family w	14	24.8	18
Economic sector of prim. Job (ref. 3-month)			
government	30.7	11	23.3
public enterpris	3.7	2.1	3.1
private	64	85.4	72
jopint-venture	1.2	1.3	1.2
foreign	0.1	0.1	0.1
other	0.3	0.2	0.3
Occup. of prim. job (1-digit based on ISCO88, ref. 3-mor			
Managers	9.1	2.9	6.8
Professionals	15.5	10.4	13.6
Technicians anc	10.5	4.9	8.4
Clerical support	3	1.6	2.5
Service and sale	8.9	12.4	10.2
Skilled agricultu	25.1	33	28.1
Craft and relate	13	20.5	15.8
Plant and mach	8.2	9.6	8.7
Elementary occ	6.5	4.8	5.9
Usual Job Economic Activity (1-digit, 1986-CODE INDEX,			
Agri	25.4	33.2	28.3
Mining	0.2	0.2	0.2
Manufact	10.7	11.4	11
Elect	1.8	1	1.5
Const	8.1	13.9	10.2
Trade	12.3	13.5	12.7
Trans	6.3	6.8	6.5
Finance	1.1	0.5	0.8
Serv	34.2	19.6	28.7
region_HIECS_12			
Metropolitan Ci	22.1	17.4	19.8
Urban Lower	11.9	10.5	11.2
Rural Lower	28.1	27.9	28
Urban Upper	14.2	14	14.1
Rural Lower	23.7	30.1	26.9
Vulnerable Employment (current)	23.8	23.9	23.8
Vulnerable Employment (usual)	24.3	24.4	24.3

Table 1d: Summary Statistics of 2010 Youth in Jordan

	2010			2016		
Age Grp in 2010	Age 30 to 59	Youth: 15 to	Total	Age 30 to 59	Youth: 15 to	Total
	%	%	%	%	%	%
Education Levels (1-digit)						
Illiterate	7.9	2.5	5.8	10.8	6	9.1
Read & Write	19.2	11.5	16.3	22.2	14.9	19.6
Basic Educatic	30.2	43.6	35.3	29.9	36.6	32.3
Secondary Edu	16.9	15.4	16.3	14.7	17.3	15.7
Post-Seconda	13.1	7.8	11.1	11.4	8	10.2
University	10.6	18.2	13.5	9.2	15.3	11.4
Post-Graduate	2.1	1	1.7	1.8	1.8	1.8
Work status during ref. 3-month, market def. (search is not required)						
Employed	48.7	47.7	48.4	34.9	50.3	40.4
Unemployed	3.3	13.6	7.2	4.4	11.2	6.9
Out of Labor F	48	38.7	44.4	60.7	38.4	52.7
employment status in prim job (ref. 3 months)						
Waged emplo	78.6	93.3	84.2	75.2	89.2	81.3
Employer	7.5	1.7	5.3	6.3	2.5	4.6
Self-employed	13.3	3.6	9.7	13.4	6.8	10.5
Unpaid family	0.5	1.4	0.9	5	1.5	3.5
Economic sector of prim. job (ref. 3-mnths)						
government	42.5	47.8	44.5	44.3	57.4	50
public	2.4	0.7	1.8	0.8	0.8	0.8
private	54	51.1	52.9	53.4	40.4	47.7
Other	0	0	0	0.6	0.5	0.5
international	1.1	0.3	0.8	0.9	0.8	0.9
Occup. of prim. job (1-digit based on ISCO2008, ref. 3-mnths)						
Managers	2.1	0.2	1.4	1.3	0.3	0.9
Professionals	18.7	18.1	18.5	19.2	19.2	19.2
Technicians ar	7.9	5.8	7.1	7	6.6	6.9
Clerical suppor	10.5	7.3	9.3	8.8	6.5	7.8
Service and sa	24.2	36.9	29	22.3	33.2	27.1
Skilled agricult	2.8	1.5	2.3	7.9	3	5.8
Craft and relat	13	16	14.2	13.3	12	12.7
Plant and mac	14	6.7	11.3	13.2	11.9	12.6
Elementary oc	6.7	7.3	7	7	7.2	7.1
Economic activity of prim. job (Sections(1digit), based on ISIC4, ref. 3-mnths)						
A:Agriculture,	3.5	1.8	2.9	8.2	3.1	5.9
B:Mining and (	1.4	0.4	1	1.7	0.6	1.2
C:Manufacturi	10.1	11.5	10.6	8.2	9.6	8.8
D:Electricity,ga	0.8	0.6	0.7	0.7	0.4	0.6
E:Water suppl	0.4	0.3	0.3	0.3	0.1	0.2
F:Construction	4.9	5.3	5	5.6	3.4	4.7
G:Wholesale a	12.5	13.3	12.8	15.1	10.3	13
H:Transportati	10.1	4.1	7.9	8.1	5.4	6.9
I:Accomodatio	1.8	2.4	2	0.9	2.4	1.5
J:Information i	0.9	1.3	1.1	0.5	0.2	0.4
K:Financial an	1.2	1.4	1.3	1.3	0.9	1.1
L:Real estate a	0.6	0.1	0.4	0.2	0.1	0.1
M:Professiona	1.5	1.5	1.5	1.9	1.5	1.7
N:Administrat	1.1	0.8	1	2.2	0.8	1.6
O:Public admir	25.1	36.4	29.3	21.2	41.5	30.1
P:Education	16	10.9	14.1	16.4	11.8	14.4
Q:Human heal	4.7	4.3	4.6	4.6	5.3	4.9
R:Arts, enterta	0.5	0.2	0.4	0.6	0.6	0.6
S:other service	2.4	2.7	2.5	1.5	1.7	1.6
T:Activities of	0.2	0.1	0.2	0.1	0	0
U:Activities of	0.3	0.1	0.2	0.7	0.3	0.5
region						
middle	51	48	49.8	48.3	43.8	46.7
north	33.5	35	34.1	33.9	36.1	34.7
south	15.5	17	16.1	17.8	20.1	18.6
Vulnerable Employment (current)	12.6	12.7	12.6	8.5	9.5	8.9
Vulnerable Employment (usual)	13.1	13.2	13.2	9.5	10.8	9.9

Table 1e: Summary Statistics of 2016 Youth in Jordan

	2016		
Age Grp in 2016	Age 30 to 59	Youth: 15 to	Total
	%	%	%
Education Levels (1-digit)			
Illiterate	8.7	5.4	7.4
Read & Write	18.4	13.4	16.4
Basic Educatio	30	40.5	34.2
Secondary Edu	15.2	13	14.3
Post-Secondar	11.1	6.2	9.1
University	14.2	21	16.9
Post-Graduate	2.3	0.6	1.6
Work status during ref. 3-month, market def. (search i:			
Employed	43	37.1	40.6
Unemployed	4.9	18.4	10.3
Out of Labor F	52.1	44.5	49.1
employment status in prim job (ref. 3 months)			
Waged employ	81.4	92.3	85.3
Employer	5.3	1.3	3.8
Self-employed	10.4	4.9	8.4
Unpaid family	3	1.6	2.5
Economic sector of prim. job (ref. 3-mnths)			
government	49.3	50.4	49.7
public	0.7	0.9	0.8
private	48.8	47.4	48.3
Other	0.4	0.4	0.4
international	0.8	0.9	0.9
Occup. of prim. job (1-digit based on ISCO 2008, ref. 3-			
Managers	1	0.1	0.6
Professionals	23.9	20.1	22.5
Technicians an	7.5	5.4	6.8
Clerical suppor	8	3.8	6.5
Service and sal	23.5	39	29.1
Skilled agricult	5.5	2.7	4.5
Craft and relat	12.7	13.7	13
Plant and macl	11.4	7.8	10.1
Elementary oc	6.6	7.4	6.9
Economic activity of prim. job (Sections(1digit), based			
A:Agriculture, f	5.7	3.1	4.8
B:Mining and c	1.4	0.8	1.2
C:Manufacturir	8.4	10.4	9.1
D:Electricity,ga	0.6	0.3	0.5
E:Water supply	0.4	0.2	0.3
F:Construction	5.1	5	5
G:Wholesale a	12.6	12.8	12.7
H:Transportatic	6.7	3.1	5.4
I:Accomodatioi	1.4	2.9	1.9
J:Information a	0.6	0.8	0.7
K:Financial anc	1.4	1.3	1.4
L:Real estate a	0.3	0	0.2
M:Professional	1.9	2.3	2.1
N:Administrati	1.6	1.1	1.4
O:Public admir	27.8	39.4	32
P:Education	15.3	8.2	12.7
Q:Human healt	5.3	5.4	5.4
R:Arts, enterta	0.6	0.3	0.5
S:other service	2	2.1	2
T:Activities of I	0.2	0.2	0.2
U:Activities of	0.7	0.4	0.6
Region			
Middle	49	47.6	48.4
North	33.9	33.5	33.8
South	17	19	17.8
Vulnerable Employment (current)	9	8.1	8.6
Vulnerable Employment (usual)	10.2	9	9.7

Source: Authors calculations from ELMPS and JLMPS.

Table 2: Relative Earnings Vulnerability for Egypt 1998, 2006, 2012

| Earnings Quintile in 98 | Age Group in 98 | | Total |
	Age 30 to	Youth: 15	
Above Lowest Quintile	86.39	70.27	80.77
Lowest Quintile	13.61	29.73	19.23
Total	100.00	100.00	100.00

| Earnings Quintile in 06 | Age Group in 06 | | Total |
	Age 30 to	Youth: 15	
Above Lowest Quintile	87.52	69.23	80.67
Lowest Quintile	12.48	30.77	19.33
Total	100.00	100.00	100.00

| Earnings Quintile in 12 | Age Group in 12 | | Total |
	Age 30 to	Youth: 15	
Above Lowest Quintile	83.70	73.30	80.11
Lowest Quintile	16.30	26.70	19.89
Total	100.00	100.00	100.00

Table 3: Absolute Earnings Vulnerability for Egypt 1998, 2006, 2012

| lowearn_98 | Age Group in 98 | | Total |
	Age 30 to	Youth: 15	
0	92.05	79.80	87.89
1	7.95	20.20	12.11
Total	100.00	100.00	100.00

| lowearn_06 | Age Group in 06 | | Total |
	Age 30 to	Youth: 15	
0	94.38	84.13	90.57
1	5.62	15.87	9.43
Total	100.00	100.00	100.00

| lowearn_12 | Age Group in 12 | | Total |
	Age 30 to	Youth: 15	
0	93.89	89.57	92.43
1	6.11	10.43	7.57
Total	100.00	100.00	100.00

Table 4: Relative Earnings Vulnerability for Jordan 2010, 2016

Earnings Quintile in 10	Age Group in 10		Total
	Age 30 to	Youth: 15	
Above Lowest Quintile	84.31	70.99	78.65
Lowest Quintile	15.69	29.01	21.35
Total	100.00	100.00	100.00

Earnings Quintile in 16	Age Group in 16		Total
	Age 30 to	Youth: 15	
Above Lowest Quintile	74.51	73.45	74.15
Lowest Quintile	25.49	26.55	25.85
Total	100.00	100.00	100.00

Table 5: Absolute Earnings Vulnerability for Jordan 2010, 2016

lowearn_10	Age Group in 10		Total
	Age 30 to	Youth: 15	
0	98.65	95.98	97.51
1	1.35	4.02	2.49
Total	100.00	100.00	100.00

lowearn_16	Age Group in 16		Total
	Age 30 to	Youth: 15	
0	97.09	97.64	97.27
1	2.91	2.36	2.73
Total	100.00	100.00	100.00

Table 6: Multinomial logit regressions of employment type on pooled data

	Egypt					Jordan				
	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed
Youth=1	-0.969***	-0.826***	-2.328***	-2.480***	-0.073	-1.811***	-0.761***	-1.166***	-2.523***	0.265***
	(0.053)	(0.046)	(0.045)	(0.080)	(0.061)	(0.124)	(0.086)	(0.052)	(0.209)	(0.073)
Age - min(age)	0.055***	0.059***	0.168***	0.118***	0.006	0.292***	0.255***	0.238***	0.245***	0.199***
	(0.005)	(0.005)	(0.005)	(0.006)	(0.007)	(0.022)	(0.019)	(0.011)	(0.030)	(0.019)
Female=1	-3.561***	-3.436***	-2.044***	-4.471***	-1.080***	-3.458***	-1.755***	-1.418***	-2.931***	-0.163
	(0.227)	(0.164)	(0.090)	(0.305)	(0.108)	(0.474)	(0.244)	(0.093)	(0.503)	(0.119)
Reads & writes	0.070	0.094	0.855***	-0.123	0.357	1.267***	1.132***	1.403***	1.579***	1.093***
	(0.156)	(0.142)	(0.164)	(0.161)	(0.258)	(0.249)	(0.178)	(0.167)	(0.434)	(0.220)
Less than intermed	-0.810***	-0.875***	0.015	-1.183***	-1.107***	1.128***	1.124***	1.951***	1.482***	0.939***
	(0.097)	(0.084)	(0.106)	(0.105)	(0.192)	(0.250)	(0.174)	(0.156)	(0.428)	(0.213)
Intermediate	0.005	0.185**	1.521***	-0.453***	0.850***	0.412	0.459**	1.802***	1.186***	0.593***
	(0.099)	(0.088)	(0.107)	(0.110)	(0.178)	(0.269)	(0.196)	(0.162)	(0.447)	(0.228)
Above intermediate	1.157***	0.997***	2.792***	0.449*	2.510***					
	(0.211)	(0.194)	(0.194)	(0.236)	(0.272)					
University+	1.004***	1.176***	3.271***	0.674***	3.176***	0.890***	0.623**	2.857***	1.350***	1.989***
	(0.140)	(0.127)	(0.136)	(0.154)	(0.210)	(0.313)	(0.250)	(0.178)	(0.493)	(0.247)
Age - min(age) squa	-0.001***	-0.002***	-0.003***	-0.002***	-0.001***	-0.011***	-0.011***	-0.011***	-0.009***	-0.010***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
Illiterate × Female	0.662***	-2.280***	-3.887***	-1.536***	-3.098***	-0.419	-1.228***	-1.423***	-12.323***	-2.521***
	(0.246)	(0.209)	(0.217)	(0.344)	(0.281)	(0.880)	(0.452)	(0.365)	(0.662)	(0.461)
Reads & writes × Fe	0.348	-1.842***	-2.991***	-1.337**	-1.703***	-0.920	-2.484***	-2.334***	-2.163**	-2.949***
	(0.319)	(0.363)	(0.306)	(0.570)	(0.382)	(0.586)	(0.378)	(0.214)	(0.887)	(0.283)
Less than interm. ×	1.102***	-0.613***	-1.974***	-0.349	-0.423*	-0.800	-2.257***	-2.427***	-2.240***	-1.916***
	(0.254)	(0.214)	(0.186)	(0.436)	(0.218)	(0.587)	(0.318)	(0.149)	(0.787)	(0.174)
Intermediate × Fem	0.589**	-0.950***	-0.645***	-0.506	0.589***	0.026	-1.161***	-1.130***	-1.012	-0.617***
	(0.247)	(0.198)	(0.107)	(0.393)	(0.133)	(0.542)	(0.310)	(0.123)	(0.616)	(0.168)
Above interm. × Fer	-0.794	-0.702**	-0.772***	-0.486	-0.211					
	(0.486)	(0.352)	(0.217)	(0.698)	(0.257)					
Household wealth	-0.147***	-0.416***	-0.085***	0.303***	-0.291***	0.213***	-0.171***	0.075**	0.795***	-0.114**
	(0.035)	(0.033)	(0.030)	(0.046)	(0.043)	(0.064)	(0.051)	(0.033)	(0.094)	(0.046)
Household size	0.057***	-0.024**	-0.086***	-0.047***	0.031**	-0.040	-0.062***	-0.098***	-0.089**	0.011
	(0.011)	(0.011)	(0.011)	(0.014)	(0.013)	(0.028)	(0.017)	(0.012)	(0.035)	(0.014)
Female-headed hho	-0.201***	0.195***	-0.110*	0.476***	0.436***	-0.048	0.663***	-0.169	0.014	0.291**
	(0.072)	(0.061)	(0.064)	(0.101)	(0.070)	(0.277)	(0.151)	(0.113)	(0.349)	(0.120)
Highest yrs. of ed. i	-0.084***	-0.129***	-0.063***	-0.102***	-0.161***	-0.043**	-0.088***	-0.008	-0.092***	-0.032*
	(0.008)	(0.009)	(0.010)	(0.011)	(0.016)	(0.020)	(0.016)	(0.011)	(0.027)	(0.017)
Father reads & writ	0.076	-0.176***	0.134**	0.045	0.251***	-0.009	0.111	-0.075	0.182	-0.079
	(0.061)	(0.057)	(0.054)	(0.078)	(0.076)	(0.111)	(0.100)	(0.063)	(0.151)	(0.091)
Father <intermedia	-0.145*	-0.405***	0.050	-0.100	0.248***	-0.082	0.103	-0.089	0.221	-0.227**
	(0.085)	(0.070)	(0.066)	(0.106)	(0.083)	(0.178)	(0.132)	(0.080)	(0.234)	(0.108)
Father intermediate	-0.777***	-1.260***	-0.331***	-0.653***	-0.110	-0.166	-0.066	-0.454***	-0.039	-0.428***
	(0.107)	(0.082)	(0.068)	(0.137)	(0.088)	(0.184)	(0.141)	(0.085)	(0.251)	(0.116)
Father university+	-1.076***	-1.487***	-0.351***	-0.498***	-0.210*	-0.278	-0.275	-0.868***	-0.524	-0.745***
	(0.160)	(0.119)	(0.088)	(0.165)	(0.116)	(0.219)	(0.182)	(0.102)	(0.324)	(0.143)
Father employer	0.783***	-0.315***	-0.061	1.139***	-0.370***	0.495***	0.311**	-0.180*	1.034***	-0.047
	(0.054)	(0.054)	(0.051)	(0.067)	(0.075)	(0.171)	(0.147)	(0.099)	(0.185)	(0.152)
Father self-employe	0.460***	-0.378***	-0.295***	0.209**	-0.147*	0.554***	0.168*	-0.332***	0.378**	-0.116
	(0.065)	(0.067)	(0.066)	(0.095)	(0.087)	(0.113)	(0.100)	(0.068)	(0.152)	(0.100)
Father unpaid fam.	0.855***	-0.435	-0.649**	-0.590	-1.182**					
	(0.249)	(0.322)	(0.325)	(0.638)	(0.537)					
Father non-employ	-0.423***	-0.027	-0.067	-0.696**	0.393***	-0.288**	-0.406***	-0.348***	-0.404*	-0.173**
	(0.158)	(0.101)	(0.114)	(0.298)	(0.128)	(0.137)	(0.113)	(0.066)	(0.210)	(0.085)
Urban Lower	0.564***	0.164**	0.121*	0.452***	0.557***					
	(0.085)	(0.075)	(0.066)	(0.106)	(0.084)					
Rural Lower	0.588***	0.063	0.335***	0.838***	0.559***					
	(0.077)	(0.065)	(0.061)	(0.093)	(0.081)					
Urban Upper	0.547***	-0.024	0.277***	0.728***	0.338***					
	(0.090)	(0.075)	(0.066)	(0.106)	(0.092)					
Rural Upper	0.587***	-0.127*	0.084	1.021***	-0.188*					
	(0.086)	(0.071)	(0.072)	(0.103)	(0.106)					
Rural residence						-0.176	-0.872***	0.069	-0.564***	-0.094
						(0.126)	(0.120)	(0.062)	(0.194)	(0.081)
North region						-0.220**	-0.456***	0.279***	-0.068	0.637***
						(0.102)	(0.086)	(0.054)	(0.134)	(0.076)
South region						-0.931***	-0.997***	0.469***	-0.302	1.108***
						(0.178)	(0.154)	(0.075)	(0.222)	(0.091)
Round 2006	0.491***	0.302***	-0.188**	0.311**	-0.420***					
	(0.103)	(0.097)	(0.086)	(0.128)	(0.101)					
Round 2012	0.357***	0.343***	-0.434***	0.038	-0.609***					
	(0.087)	(0.079)	(0.074)	(0.108)	(0.086)					
Round 2016						-0.691***	-0.603***	-0.423***	-1.026***	0.266***
						(0.102)	(0.084)	(0.053)	(0.133)	(0.079)
Constant	-0.238	2.490***	0.677***	0.460**	-0.011	-1.670***	-0.297	-0.787***	-1.766***	-3.040***
	(0.158)	(0.146)	(0.160)	(0.183)	(0.222)	(0.324)	(0.257)	(0.207)	(0.501)	(0.288)
Observations	39,784	39,784	39,784	39,784	39,784	19,254	19,254	19,254	19,254	19,254
Clusters	14798	14798	14798	14798	14798	7674	7674	7674	7674	7674
Chi-squared	16681	16681	16681	16681	16681	32725	32725	32725	32725	32725
P-value	0	0	0	0	0	0	0	0	0	0
Pseudo R-squared	0.333	0.333	0.333	0.333	0.333	0.259	0.259	0.259	0.259	0.259

Figure 1. Predicted Probability of Employment Type by Age, Egyptian Urban Men
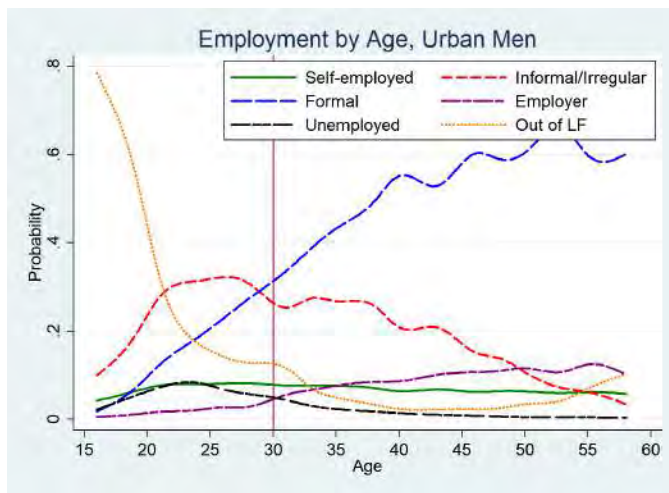
Figure 1. Predicted Probability of Employment Type by Age, Egyptian Urban Women
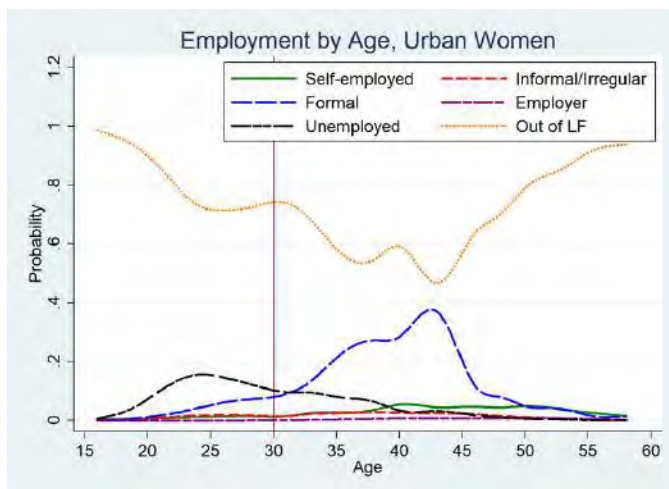
Figure 1. Predicted Probability of Employment Type by Age, Egyptian Rural Men
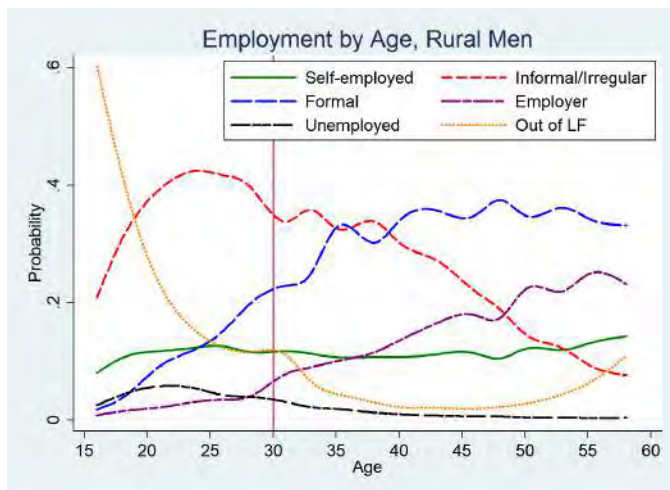
Figure 1. Predicted Probability of Employment Type by Age, Egyptian Rural Women
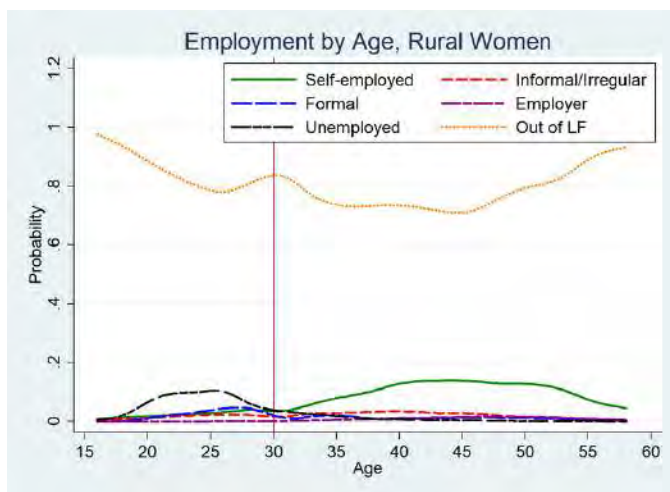
Figure 1. Predicted Probability of Employment Type by HH Wealth, Egyptian Men in Male HHs
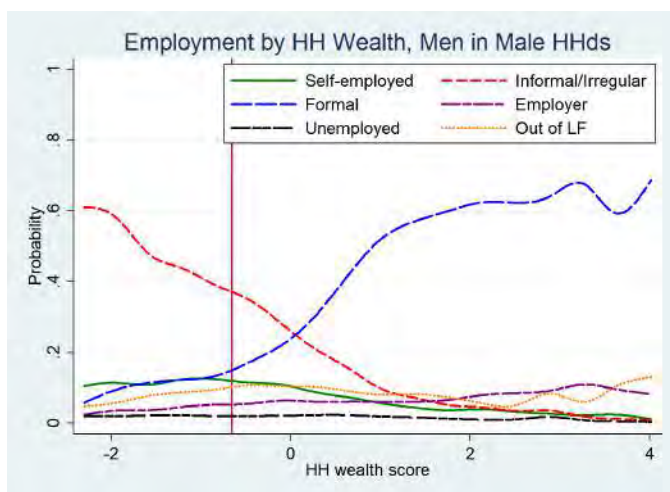
Figure 1. Predicted Probability of Employment Type by HH Wealth, Egyptian Women in Male HHs
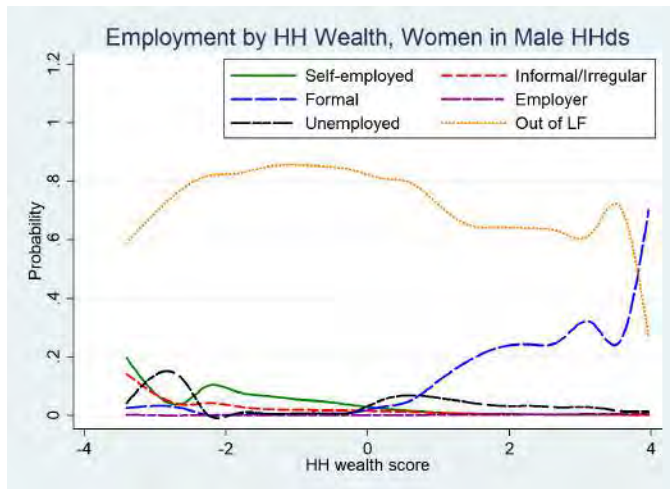
Figure 1. Predicted Probability of Employment Type by HH Wealth, Egyptian Men in Female HHs
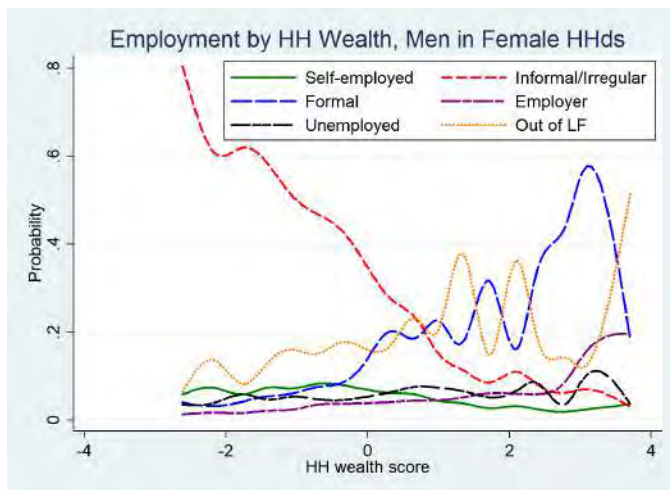
Figure 1. Predicted Probability of Employment Type by HH Wealth, Egyptian Women in Female HHs

Figure 1. Predicted Probability of Employment Type by HH Wealth, Egyptian Sons of Wage-Worker Fathers

Figure 1. Predicted Probability of Employment Type by HH Wealth, Egyptian Sons of Self-employed/Employer Fathers

Figure 1. Predicted Probability of Employment Type by HH Wealth, Egyptian Daughters of Wage-Worker Fathers

Figure 1. Predicted Probability of Employment Type by HH Wealth, Egyptian Sons of Self-employed/Employer Fathers

Figure 1. Predicted Probability of Employment by Age, Sex and Survey Wave, Egypt

Figure 1. Predicted Probability of Employment Type by Age, Jordanian Urban Men
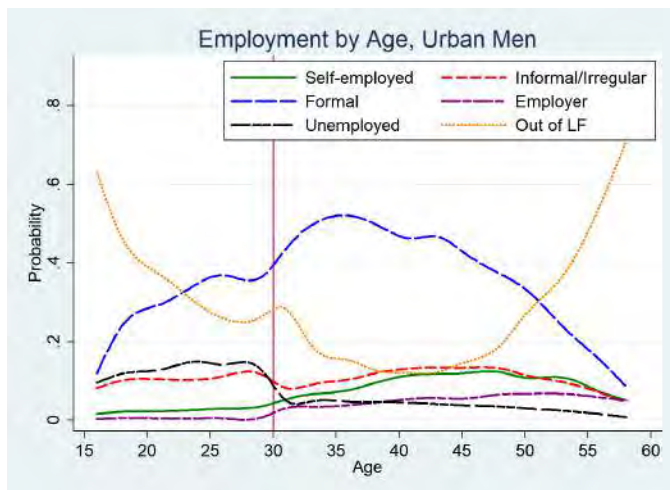
Figure 1. Predicted Probability of Employment Type by Age, Jordanian Urban Women
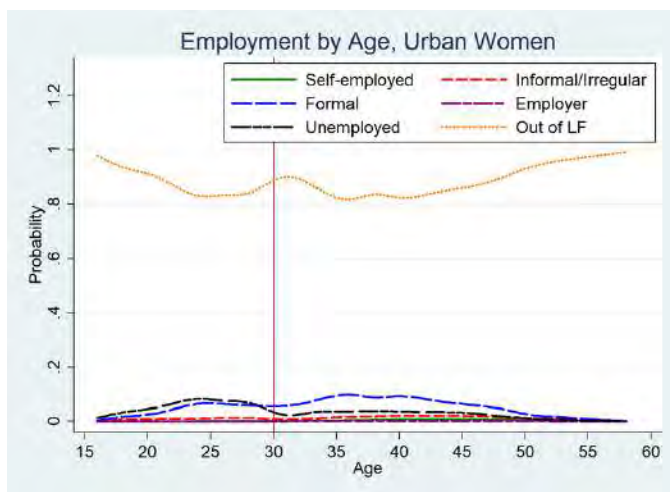
Figure 1. Predicted Probability of Employment Type by Age, Jordanian Rural Men
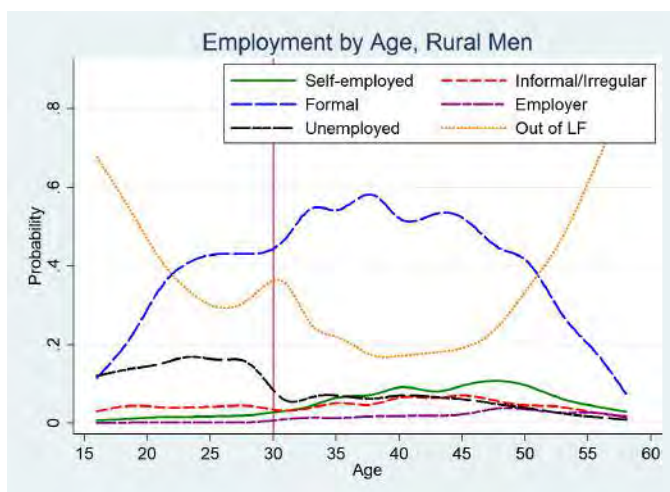
Figure 1. Predicted Probability of Employment Type by Age, Jordanian Rural Women
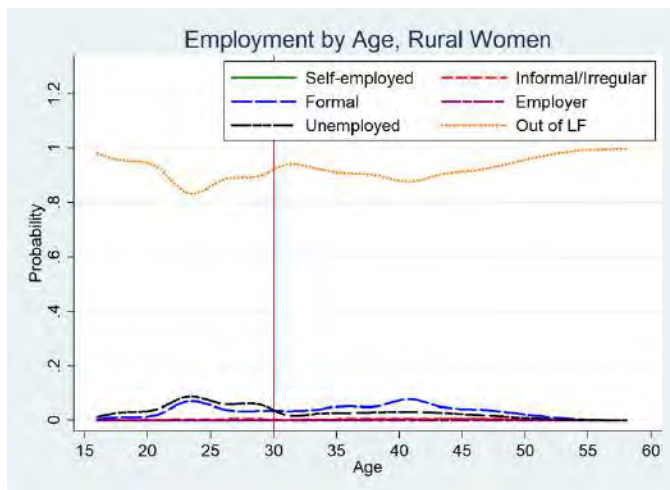
Figure 1. Predicted Probability of Employment Type by HH Wealth, Jordanian Men in Male HHs
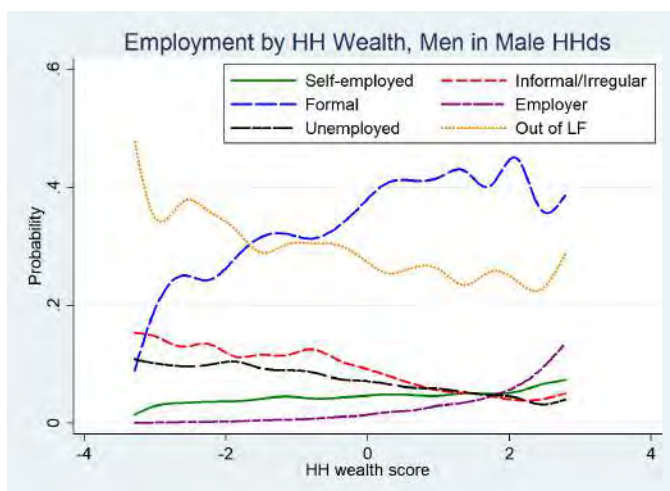
Figure 1. Predicted Probability of Employment Type by HH Wealth, Jordanian Women in Male HHs
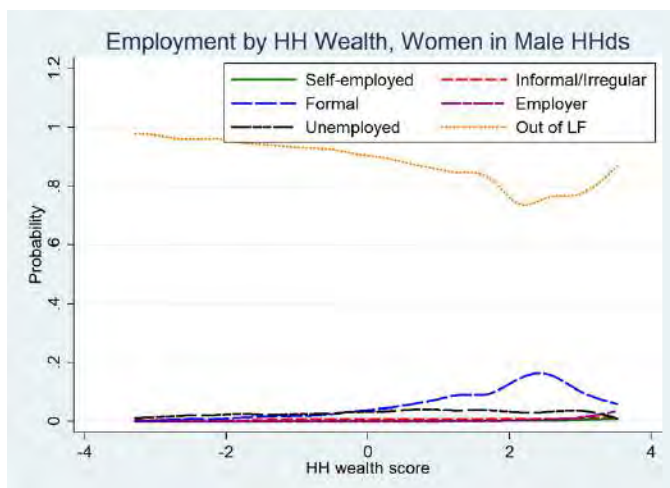
Figure 1. Predicted Probability of Employment Type by HH Wealth, Jordanian Men in Female HHs
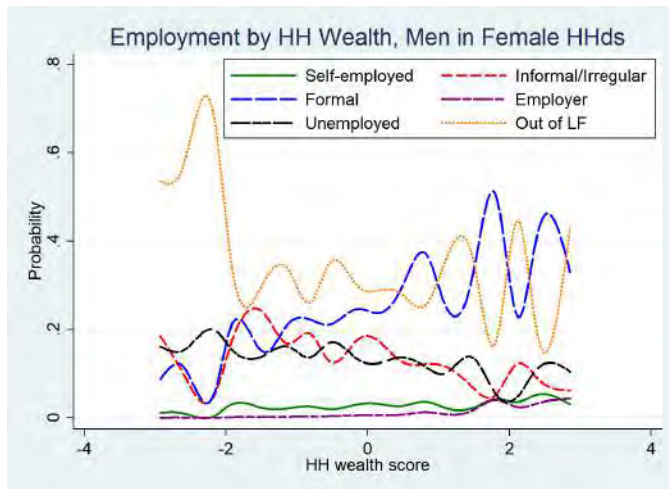
Figure 1. Predicted Probability of Employment Type by HH Wealth, Jordanian Women in Female HHs
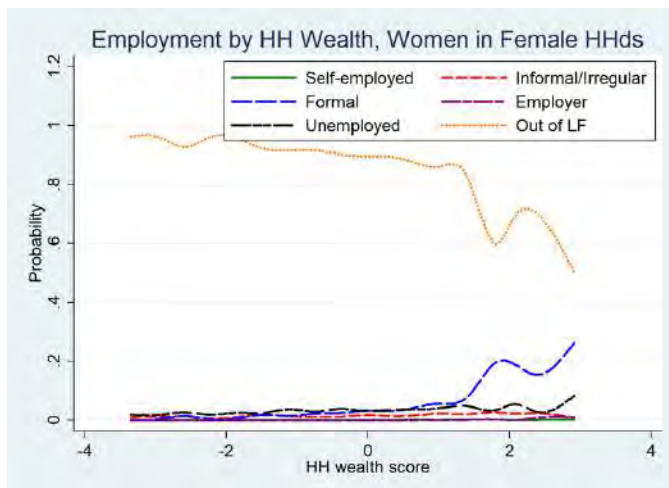
Figure 1. Predicted Probability of Employment Type by HH Wealth, Jordanian Sons of Wage-Worker Fathers
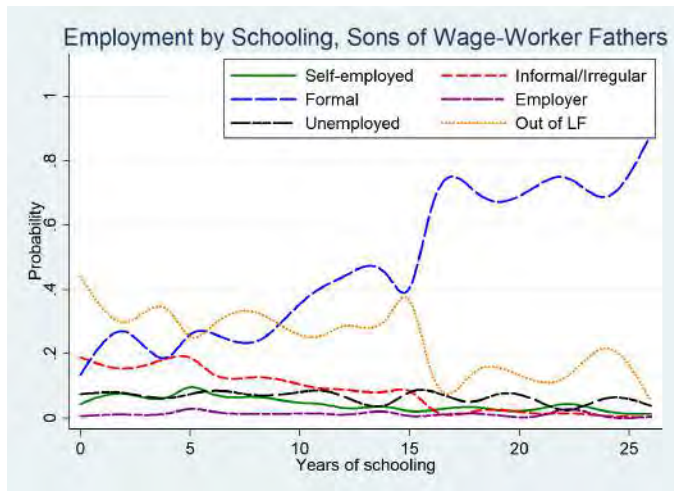
Figure 1. Predicted Probability of Employment Type by HH Wealth, Jordanian Sons of Self-employed/Employer Fathers
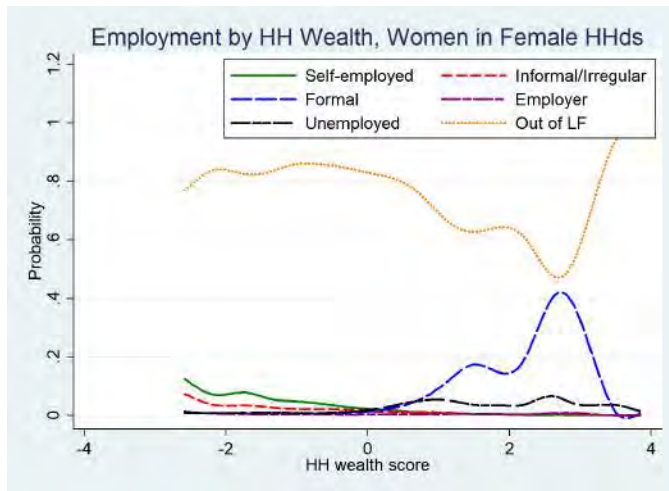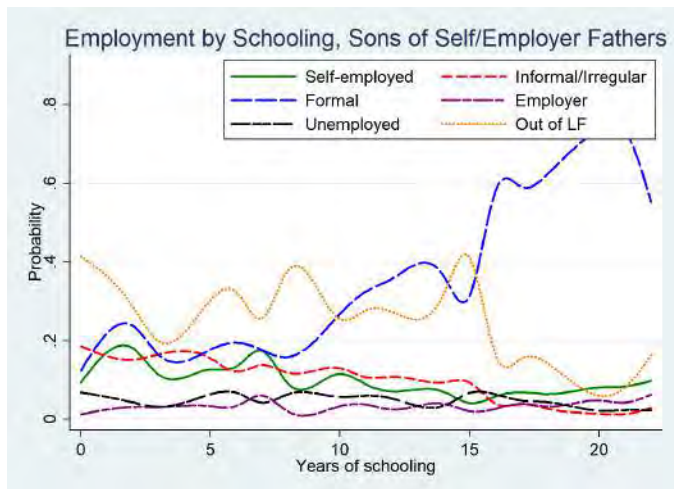

Figure 1. Predicted Probability of Employment Type by HH Wealth, Jordanian Daughters of Wage-Worker Fathers
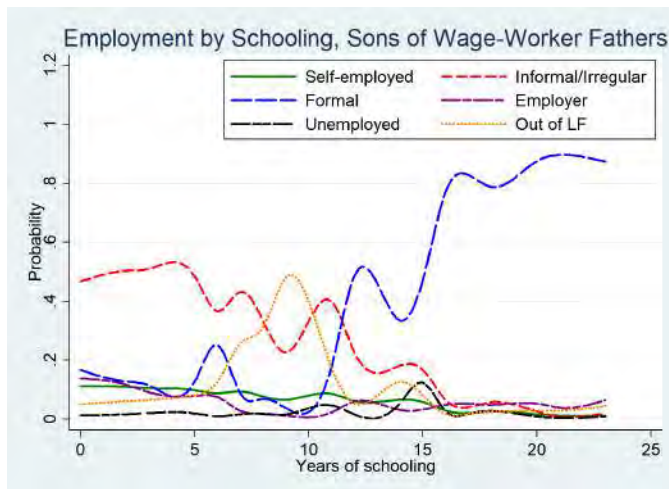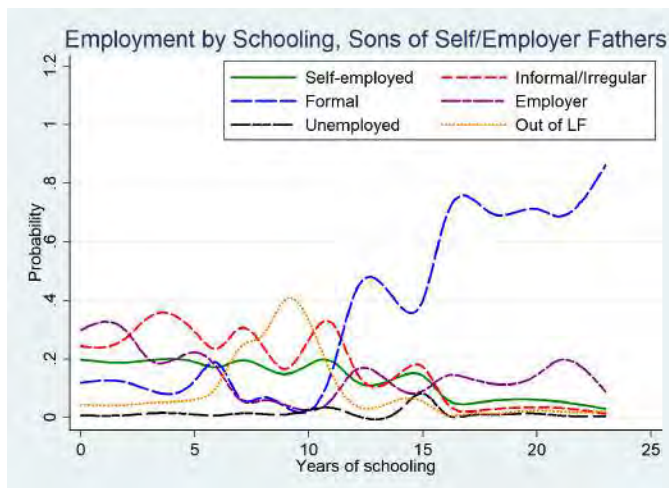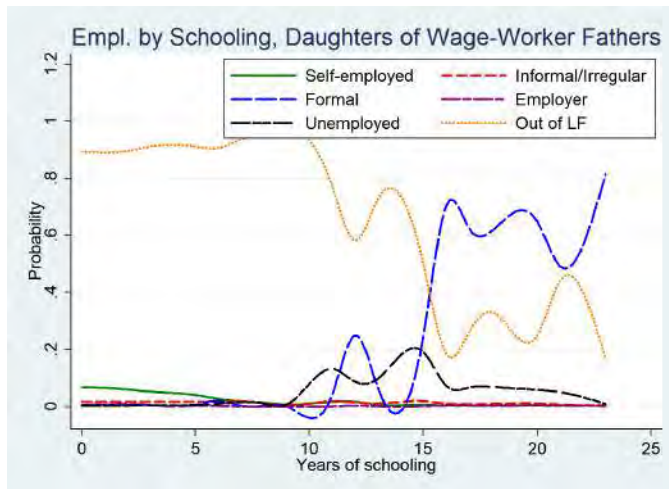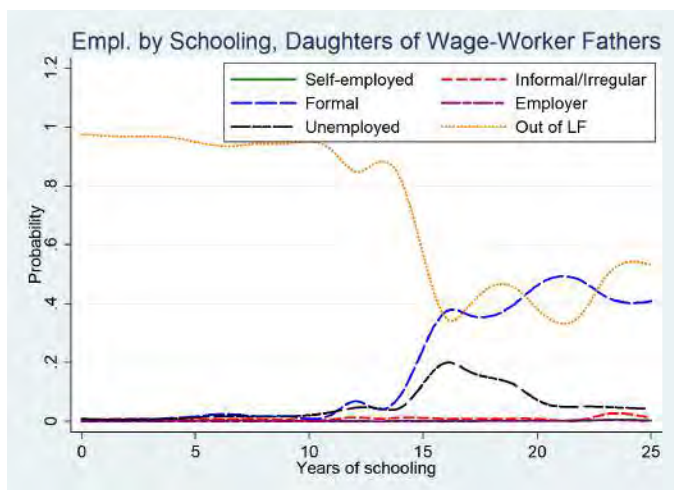
Figure 1. Predicted Probability of Employment Type by HH Wealth, Jordanian Sons of Self-employed/Employer Fathers
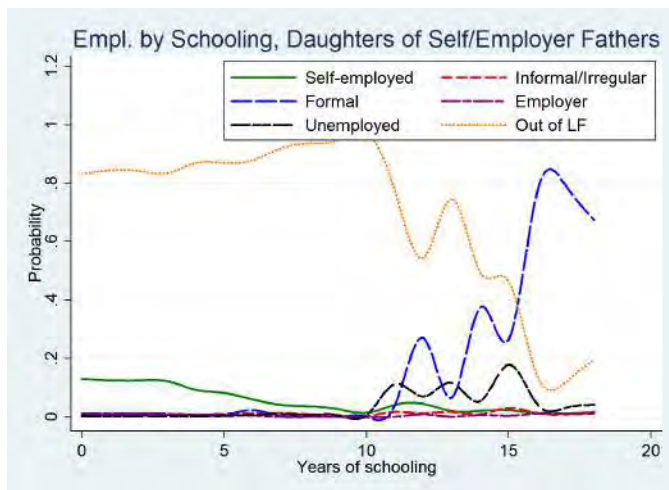

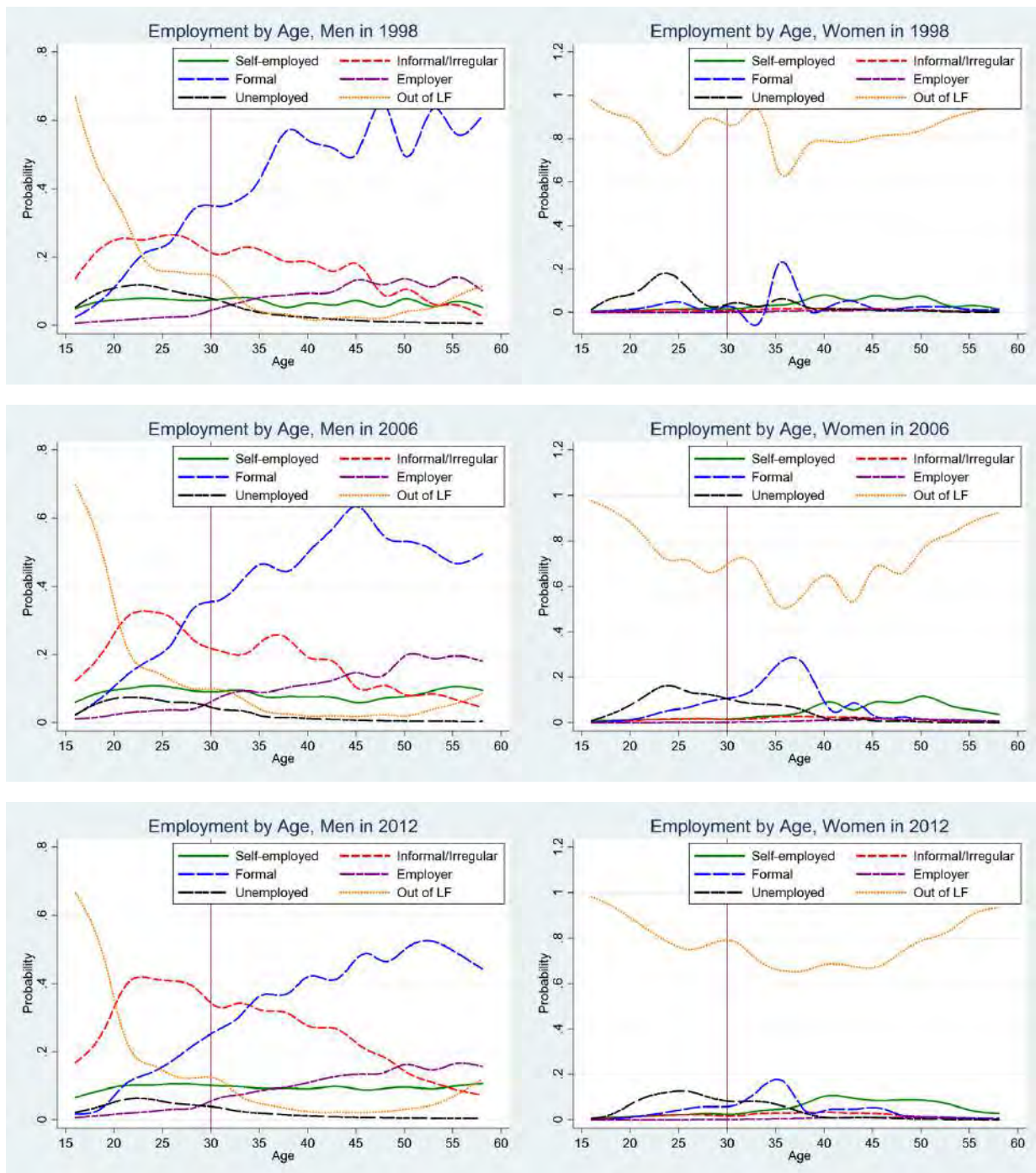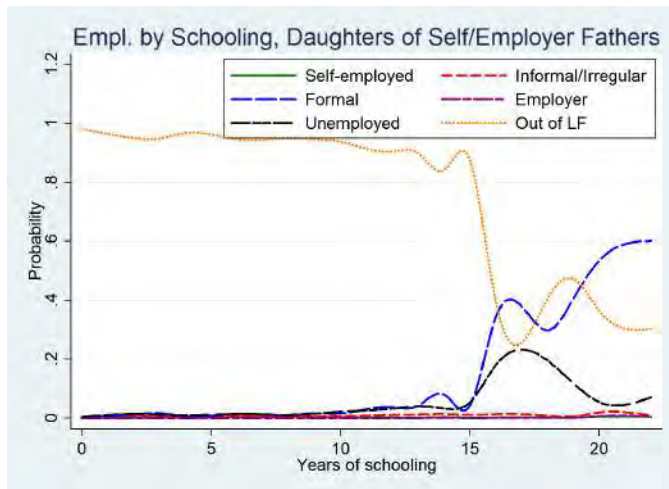Figure 1. Predicted Probability of Employment by Age, Sex and Survey Wave, Jordan
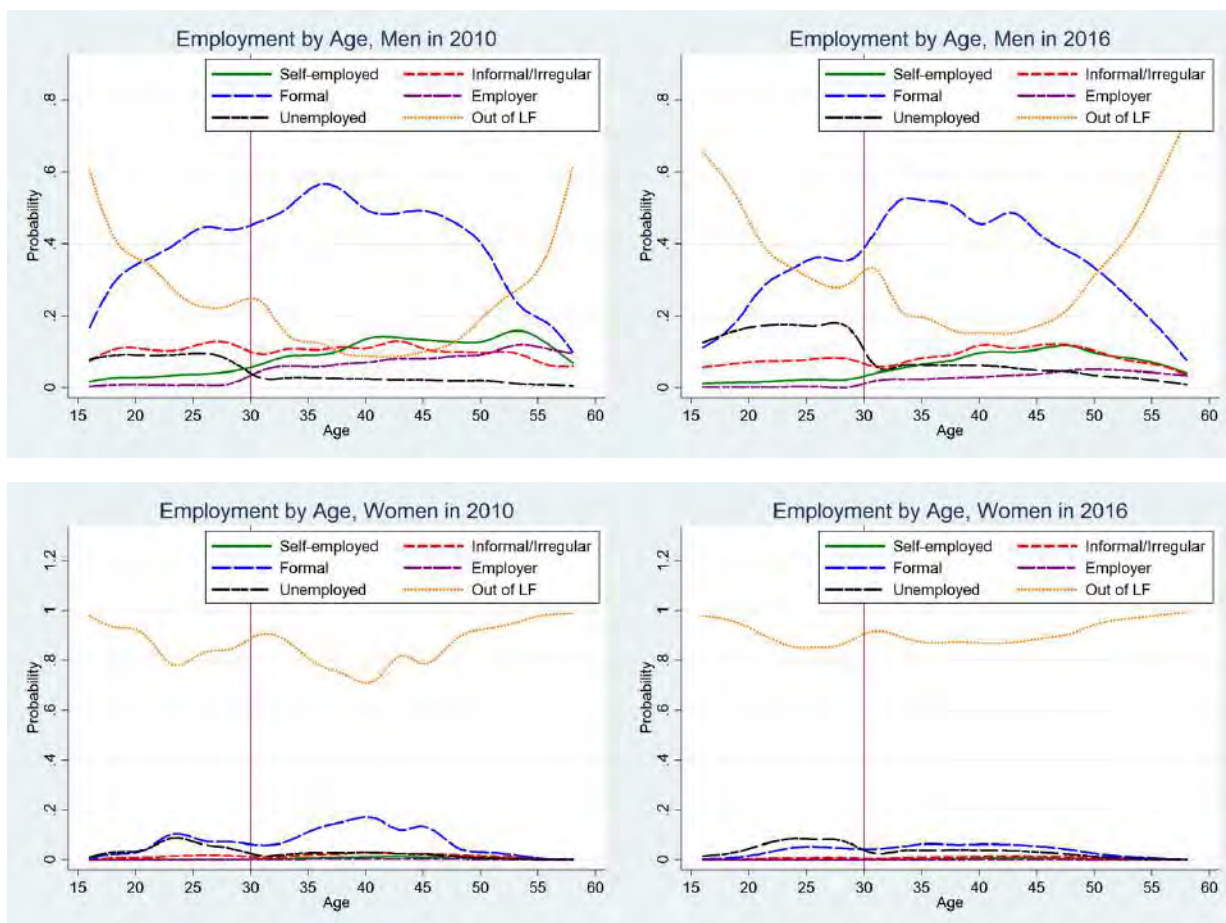
Table A1a. Multinomial logit regressions on pooled data, separating youth & non-youth, Egypt

	Youth					Non-youth				
	Self-empl./Un paid family wrkr.	Informal+i rregular	Public + formal private	Employer	Unemploy ed	Self-empl./Un paid family wrkr.	Informal+i rregular	Public + formal private	Employer	Unemploy ed
Age - min(age)	0.245***	0.328***	0.529***	0.636***	0.278***	-0.025***	-0.084***	0.065***	0.008	-0.106***
	(0.014)	(0.013)	(0.020)	(0.112)	(0.044)	(0.006)	(0.006)	(0.005)	(0.007)	(0.010)
Age - min(age) squared	-0.003***	-0.005***	-0.007***	-0.013**	-0.011***	-0.000	0.000***	-0.001***	-0.000***	0.001***
	(0.000)	(0.000)	(0.001)	(0.006)	(0.003)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female=1	-3.799***	-3.410***	-1.892***	-17.933***	-1.086***	-3.631***	-3.867***	-2.288***	-4.423***	-1.452***
	(0.328)	(0.209)	(0.131)	(0.188)	(0.137)	(0.312)	(0.281)	(0.111)	(0.313)	(0.210)
Reads & writes	0.024	0.098	0.564	-0.303	-0.191	0.023	-0.046	0.797***	-0.179	0.557*
	(0.282)	(0.254)	(0.395)	(0.434)	(0.426)	(0.188)	(0.174)	(0.181)	(0.180)	(0.329)
Less than intermediate	-0.871***	-0.863***	-0.451*	-0.994***	-1.203***	-0.018	-0.160	0.749***	-0.507***	-0.027
	(0.175)	(0.148)	(0.247)	(0.276)	(0.264)	(0.138)	(0.130)	(0.136)	(0.137)	(0.279)
Intermediate	-0.454***	-0.411***	0.520**	-0.553**	0.320	0.162	0.009	1.622***	-0.513***	0.757***
	(0.176)	(0.155)	(0.246)	(0.274)	(0.258)	(0.143)	(0.137)	(0.139)	(0.146)	(0.266)
Above intermediate	0.884***	0.672**	2.198***	0.115	2.236***	0.228	-0.458*	1.646***	-0.658***	1.085***
	(0.339)	(0.305)	(0.355)	(0.550)	(0.392)	(0.262)	(0.251)	(0.222)	(0.266)	(0.408)
University+	0.584**	0.485**	2.111***	0.480	2.753***	-0.208	-0.634***	1.965***	-0.739***	1.187***
	(0.240)	(0.207)	(0.286)	(0.378)	(0.303)	(0.189)	(0.186)	(0.168)	(0.188)	(0.334)
Illiterate × Female	0.350	-2.925***	-3.927***	11.539***	-3.037***	0.759**	-1.893***	-3.450***	-1.420***	-3.302***
	(0.387)	(0.336)	(0.576)	(0.672)	(0.404)	(0.329)	(0.316)	(0.231)	(0.348)	(0.410)
Reads & writes × Female	0.222	-2.365***	-3.925***	-0.452	-1.141**	0.277	-1.703***	-2.568***	-1.252**	-2.352***
	(0.541)	(0.611)	(1.052)	(0.496)	(0.571)	(0.407)	(0.485)	(0.320)	(0.572)	(0.563)
Less than interm. × Female	1.386***	-0.945***	-1.846***	12.530***	-0.311	-0.036	-1.416***	-2.643***	-1.288***	-1.777***
	(0.365)	(0.292)	(0.372)	(1.039)	(0.270)	(0.358)	(0.351)	(0.220)	(0.457)	(0.401)
Intermediate × Female	0.857***	-0.846***	-0.984***	13.191***	0.707**	-0.222	-1.806***	-1.048***	-1.378***	-0.167
	(0.352)	(0.248)	(0.175)	(0.464)	(0.166)	(0.350)	(0.348)	(0.148)	(0.437)	(0.262)
Above interm. × Female	-0.795	-0.733*	-1.098***	13.664***	-0.279	-0.765	-1.195*	-0.514**	-0.799	-0.304
	(0.740)	(0.443)	(0.336)	(1.131)	(0.353)	(0.640)	(0.690)	(0.245)	(0.816)	(0.436)
Household wealth	-0.114**	-0.328***	-0.003	0.261**	-0.230***	-0.144***	-0.500***	-0.050	0.341***	-0.311***
	(0.054)	(0.045)	(0.052)	(0.111)	(0.052)	(0.045)	(0.050)	(0.037)	(0.054)	(0.079)
Household size	0.102***	0.014	-0.071***	-0.146***	0.057***	0.026*	-0.022	-0.078***	-0.027	-0.022
	(0.015)	(0.014)	(0.019)	(0.038)	(0.015)	(0.014)	(0.016)	(0.014)	(0.017)	(0.029)
Female-headed hhd.	-0.296***	0.232***	-0.035	0.637***	0.418***	0.217**	0.681***	0.305***	0.847***	0.957***
	(0.113)	(0.075)	(0.100)	(0.165)	(0.086)	(0.092)	(0.112)	(0.085)	(0.136)	(0.131)
Highest yrs. of ed. in hhd.	-0.112***	-0.158***	-0.104***	-0.159***	-0.150***	-0.017	-0.009	0.033***	-0.016	-0.063**
	(0.016)	(0.015)	(0.021)	(0.028)	(0.021)	(0.010)	(0.012)	(0.012)	(0.012)	(0.025)
Father reads & writes	0.213**	-0.083	0.131	0.185	0.276***	-0.012	-0.282***	0.123*	-0.000	0.260**
	(0.099)	(0.083)	(0.105)	(0.181)	(0.096)	(0.079)	(0.084)	(0.066)	(0.091)	(0.128)
Father <intermediate	-0.054	-0.140	0.314***	0.066	0.394***	0.003	-0.477***	0.069	-0.032	0.217
	(0.126)	(0.089)	(0.111)	(0.214)	(0.101)	(0.116)	(0.119)	(0.086)	(0.132)	(0.150)
Father intermediate+	-0.460***	-0.954***	-0.104	-0.439*	0.049	-0.312*	-0.697***	0.038	-0.184	0.058
	(0.143)	(0.102)	(0.110)	(0.262)	(0.105)	(0.167)	(0.153)	(0.096)	(0.170)	(0.174)
Father university+	-0.899***	-1.267***	0.038	-1.326***	-0.044	-0.253	-0.672***	-0.138	0.255	-0.183
	(0.221)	(0.151)	(0.134)	(0.425)	(0.138)	(0.241)	(0.207)	(0.123)	(0.197)	(0.247)
Father employer	1.283***	-0.192**	-0.213**	1.289***	-0.302***	0.531***	-0.278***	0.021	1.150***	-0.346***
	(0.086)	(0.076)	(0.096)	(0.152)	(0.092)	(0.070)	(0.079)	(0.063)	(0.080)	(0.129)
Father self-employed	0.504***	-0.286***	-0.254**	0.315	0.022	0.451***	-0.450***	-0.300***	0.186*	-0.439***
	(0.112)	(0.097)	(0.124)	(0.220)	(0.106)	(0.081)	(0.096)	(0.081)	(0.108)	(0.163)
Father unpaid fam. wrkr.	1.356***	-0.343	-1.589**	-0.047	-0.878	0.119	-0.751	-0.586	-1.010	-14.794***
	(0.328)	(0.394)	(0.726)	(1.104)	(0.543)	(0.365)	(0.544)	(0.445)	(0.806)	(0.378)
Father non-employed	-0.444*	0.118	0.093	0.315	0.415***	0.113	0.064	-0.004	-1.284***	0.876***
	(0.231)	(0.119)	(0.153)	(0.350)	(0.148)	(0.240)	(0.223)	(0.205)	(0.498)	(0.263)
Urban Lower	0.595***	0.139	-0.315***	0.376	0.415***	0.694***	0.285***	0.373***	0.642***	0.780***
	(0.157)	(0.107)	(0.110)	(0.252)	(0.105)	(0.103)	(0.107)	(0.083)	(0.121)	(0.144)
Rural Lower	0.665***	0.042	0.054	0.778***	0.494***	0.742***	0.261***	0.578***	1.053***	0.737***
	(0.145)	(0.092)	(0.098)	(0.224)	(0.098)	(0.094)	(0.099)	(0.079)	(0.109)	(0.140)
Urban Upper	0.876***	-0.023	-0.070	0.667***	0.296***	0.531***	0.171	0.553***	0.944***	0.512***
	(0.157)	(0.106)	(0.111)	(0.243)	(0.110)	(0.108)	(0.111)	(0.083)	(0.122)	(0.167)
Rural Upper	0.776***	-0.123	-0.435***	0.798***	-0.221*	0.633***	0.051	0.459***	1.283***	-0.083
	(0.151)	(0.098)	(0.123)	(0.241)	(0.125)	(0.107)	(0.111)	(0.094)	(0.122)	(0.188)
Round 2006	0.465***	0.206	-0.493***	0.199	-0.549***	0.506***	0.347**	-0.082	0.370**	-0.307
	(0.163)	(0.132)	(0.138)	(0.285)	(0.120)	(0.134)	(0.146)	(0.113)	(0.155)	(0.218)
Round 2012	0.192	0.155	-0.739***	-0.332	-0.898***	0.463***	0.463***	-0.305***	0.162	-0.105
	(0.141)	(0.111)	(0.121)	(0.256)	(0.104)	(0.110)	(0.120)	(0.094)	(0.128)	(0.173)
Constant	-2.291***	0.441*	-2.708***	-3.956***	-1.160***	0.006	2.460***	0.323*	0.341	0.205
	(0.288)	(0.241)	(0.353)	(0.701)	(0.359)	(0.187)	(0.199)	(0.185)	(0.207)	(0.340)
Observations	18,919	18,919	18,919	18,919	18,919	20,865	20,865	20,865	20,865	20,865
Clusters	9920	9920	9920	9920	9920	11260	11260	11260	11260	11260
Chi-squared						16255	16255	16255	16255	16255
P-value						0	0	0	0	0
Pseudo R-squared	0.328	0.328	0.328	0.328	0.328	0.342	0.342	0.342	0.342	0.342

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1b. Multinomial logit regressions on pooled data, separating youth & non-youth, Jordan

	Youth					Non-youth				
	Self-empl./Un paid family wrkr.	Informal+i rregular	Public + formal private	Employer	Unemploy ed	Self-empl./Un paid family wrkr.	Informal+i rregular	Public + formal private	Employer	Unemploy ed
Age - min(age)	1.048***	0.745***	1.158***	1.186***	0.871***	0.097***	0.058**	0.014	0.060*	-0.071***
	(0.118)	(0.067)	(0.056)	(0.267)	(0.056)	(0.024)	(0.024)	(0.014)	(0.032)	(0.023)
Age - min(age) squared	-0.041***	-0.031***	-0.047***	-0.051***	-0.043***	-0.005***	-0.005***	-0.004***	-0.004***	-0.001
	(0.007)	(0.004)	(0.003)	(0.014)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Female=1	-3.290***	-1.605***	-1.188***	-15.934***	0.027	-3.620***	-2.022***	-1.681***	-2.980***	-0.480**
	(1.044)	(0.331)	(0.128)	(0.506)	(0.141)	(0.534)	(0.354)	(0.132)	(0.505)	(0.234)
Reads & writes	2.301***	1.675***	2.106***	1.856	1.647***	0.848***	0.628***	1.004***	1.280***	0.604*
	(0.614)	(0.348)	(0.387)	(1.212)	(0.370)	(0.285)	(0.243)	(0.220)	(0.472)	(0.313)
Less than intermediate	1.898***	1.462***	2.819***	2.028*	1.253***	0.622**	0.530**	1.271***	0.957**	0.368
	(0.602)	(0.324)	(0.353)	(1.197)	(0.334)	(0.288)	(0.243)	(0.214)	(0.470)	(0.317)
Intermediate	0.082	-0.094	1.675***	0.369	-0.130	0.344	0.332	1.598***	1.125**	0.687**
	(0.669)	(0.350)	(0.360)	(1.316)	(0.351)	(0.312)	(0.270)	(0.223)	(0.490)	(0.339)
University+	0.210	0.094	2.279***	0.369	1.294***	0.359	-0.225	2.202***	0.801	0.924**
	(0.738)	(0.415)	(0.374)	(1.402)	(0.368)	(0.365)	(0.354)	(0.248)	(0.545)	(0.393)
Illiterate × Female	-12.024***	-2.449**	-2.029*	0.929	-3.558***	-0.242	-1.026*	-1.304***	-13.048***	-2.286***
	(1.214)	(1.102)	(1.058)	(1.172)	(1.070)	(0.916)	(0.562)	(0.413)	(0.699)	(0.563)
Reads & writes × Female	-14.953***	-3.532***	-3.778***	-1.687**	-4.031***	-0.364	-2.077***	-1.890***	-1.852**	-2.483***
	(1.086)	(0.663)	(0.566)	(0.772)	(0.437)	(0.638)	(0.494)	(0.249)	(0.893)	(0.401)
Less than interm. × Female	-1.081	-2.997***	-3.288***	11.023***	-2.548***	-0.682	-1.979***	-2.117***	-2.274**	-1.808***
	(1.198)	(0.457)	(0.242)	(1.164)	(0.220)	(0.637)	(0.449)	(0.198)	(0.885)	(0.316)
Intermediate × Female	-0.808	-0.752*	-1.395***	12.658***	-0.501**	0.018	-1.624***	-1.156***	-1.297**	-0.978***
	(1.477)	(0.428)	(0.195)	(1.151)	(0.210)	(0.602)	(0.447)	(0.168)	(0.634)	(0.299)
Household wealth	0.245*	-0.045	0.125**	0.681***	-0.051	0.295***	-0.186***	0.165***	0.920***	-0.060
	(0.145)	(0.076)	(0.050)	(0.211)	(0.062)	(0.072)	(0.067)	(0.043)	(0.108)	(0.072)
Household size	0.056	0.025	0.024	-0.073	0.074***	-0.001	-0.055**	-0.069***	-0.038	0.041
	(0.060)	(0.024)	(0.017)	(0.093)	(0.017)	(0.026)	(0.025)	(0.017)	(0.037)	(0.026)
Female-headed hhd	0.126	0.522***	-0.159	0.444	0.299*	-0.179	1.109***	0.049	-0.243	0.344
	(0.369)	(0.202)	(0.160)	(0.505)	(0.153)	(0.390)	(0.242)	(0.171)	(0.518)	(0.223)
Highest yrs. of ed. in hhd.	-0.073	-0.139***	-0.035*	-0.125	-0.016	-0.016	-0.031	0.018	-0.068**	-0.019
	(0.048)	(0.028)	(0.021)	(0.077)	(0.024)	(0.021)	(0.019)	(0.014)	(0.030)	(0.024)
Father reads & writes	-0.108	0.065	-0.151	-0.111	-0.220*	-0.117	0.047	-0.178**	0.102	-0.024
	(0.268)	(0.190)	(0.120)	(0.556)	(0.129)	(0.121)	(0.120)	(0.074)	(0.157)	(0.127)
Father <intermediate	-0.218	0.181	0.023	-0.373	-0.331**	-0.008	0.045	-0.126	0.377	0.100
	(0.333)	(0.213)	(0.133)	(0.646)	(0.141)	(0.214)	(0.195)	(0.114)	(0.250)	(0.178)
Father intermediate+	-0.453	0.077	-0.312**	-0.238	-0.473***	0.041	-0.182	-0.492***	0.030	-0.369*
	(0.362)	(0.220)	(0.134)	(0.638)	(0.151)	(0.208)	(0.224)	(0.118)	(0.282)	(0.208)
Father university+	-0.847*	-0.221	-0.743***	-1.576	-0.894***	0.304	0.061	-0.620***	0.056	-0.213
	(0.459)	(0.273)	(0.161)	(1.017)	(0.182)	(0.254)	(0.267)	(0.150)	(0.343)	(0.251)
Father employer	0.875***	0.475**	-0.316*	1.050**	-0.232	0.502**	0.197	-0.002	1.171***	0.276
	(0.331)	(0.201)	(0.164)	(0.490)	(0.205)	(0.198)	(0.211)	(0.122)	(0.206)	(0.228)
Father self-empl./unpaid fam. wrkr.	0.671***	0.341**	-0.248**	0.026	-0.131	0.562***	0.070	-0.303***	0.468***	0.018
	(0.250)	(0.157)	(0.119)	(0.490)	(0.135)	(0.128)	(0.134)	(0.084)	(0.162)	(0.147)
Father non-employed	-0.661**	-0.448**	-0.202**	-0.532	-0.200*	-0.132	-0.373**	-0.406***	-0.351	0.016
	(0.312)	(0.178)	(0.103)	(0.566)	(0.110)	(0.156)	(0.151)	(0.091)	(0.228)	(0.140)
Rural residence	-0.268	-1.115***	0.147	0.072	-0.095	-0.114	-0.622***	0.061	-0.676***	-0.044
	(0.263)	(0.178)	(0.092)	(0.437)	(0.102)	(0.142)	(0.156)	(0.081)	(0.220)	(0.132)
North region	-0.744***	-0.456***	0.191**	0.208	0.494***	-0.066	-0.462***	0.267***	-0.096	0.829***
	(0.228)	(0.126)	(0.085)	(0.391)	(0.096)	(0.114)	(0.116)	(0.070)	(0.145)	(0.124)
South region	-1.574***	-0.977***	0.288**	0.183	0.982***	-0.783***	-1.058***	0.502***	-0.384	1.137***
	(0.440)	(0.233)	(0.116)	(0.504)	(0.118)	(0.193)	(0.202)	(0.097)	(0.244)	(0.147)
Round 2016	-0.518**	-0.985***	-0.676***	-1.094***	0.105	-0.860***	-0.483***	-0.510***	-1.123***	0.135
	(0.223)	(0.128)	(0.084)	(0.385)	(0.098)	(0.114)	(0.116)	(0.071)	(0.145)	(0.136)
Constant	-7.400***	-2.918***	-7.065***	-7.760***	-5.737***	-0.828**	0.381	0.435	-1.018*	-1.688***
	(0.862)	(0.503)	(0.485)	(1.645)	(0.493)	(0.367)	(0.342)	(0.268)	(0.555)	(0.408)
Observations	9,007	9,007	9,007	9,007	9,007	10,247	10,247	10,247	10,247	10,247
Clusters	4664	4664	4664	4664	4664	6160	6160	6160	6160	6160
Chi-squared	31006	31006	31006	31006	31006	30401	30401	30401	30401	30401
P-value	0	0	0	0	0	0	0	0	0	0
Pseudo R-squared	0.306	0.306	0.306	0.306	0.306	0.265	0.265	0.265	0.265	0.265

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2a. Multinomial logit regressions by year, pooling youth & non-youth, Egypt

	1998					2006					2012				
	Self-empl./Unpaid family wrkr.	Informal+irregular	Public+formal private	Employer	Unemployed	Self-empl./Unpaid family wrkr.	Informal+irregular	Public+formal private	Employer	Unemployed	Self-empl./Unpaid family wrkr.	Informal+irregular	Public+formal private	Employer	Unemployed
Youth=1	-1.380***	-1.055***	-3.026***	-3.177***	0.080	-1.161***	-1.096***	-2.948***	-2.802***	0.081	-1.437***	-1.434***	-2.887***	-3.051***	-0.577***
	(0.104)	(0.096)	(0.084)	(0.154)	(0.113)	(0.065)	(0.067)	(0.064)	(0.095)	(0.105)	(0.066)	(0.058)	(0.060)	(0.096)	(0.077)
Age - min(age)	0.209***	0.220***	0.351***	0.346***	0.119***	0.197***	0.276***	0.380***	0.370***	0.150***	0.252***	0.310***	0.369***	0.354***	0.175***
	(0.020)	(0.018)	(0.016)	(0.025)	(0.023)	(0.013)	(0.014)	(0.013)	(0.017)	(0.031)	(0.013)	(0.012)	(0.012)	(0.016)	(0.022)
Age - min(age) squared	-0.008***	-0.009***	-0.012***	-0.012***	-0.006***	-0.007***	-0.011***	-0.012***	-0.012***	-0.008***	-0.009***	-0.012***	-0.011***	-0.011***	-0.009***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
Female=1	-3.284***	-2.434***	-1.704***	-4.232***	-0.766***	-3.871***	-3.425***	-2.285***	-4.664***	-1.628***	-4.051***	-4.014***	-2.498***	-5.386***	-1.434***
	(0.554)	(0.401)	(0.216)	(0.562)	(0.255)	(0.335)	(0.248)	(0.148)	(0.415)	(0.165)	(0.264)	(0.197)	(0.122)	(0.431)	(0.144)
Reads & writes	-0.535**	-0.345	0.791***	-0.334	-0.387	0.106	0.245	0.973***	0.009	0.485	-0.007	0.044	0.811***	-0.118	0.265
	(0.229)	(0.210)	(0.228)	(0.246)	(0.314)	(0.206)	(0.192)	(0.205)	(0.204)	(0.397)	(0.228)	(0.205)	(0.232)	(0.231)	(0.364)
Less than intermediate	-1.590***	-1.457***	0.035	-1.273***	-1.775***	-1.021***	-0.992***	0.106	-1.182***	-1.255***	-0.859***	-0.917***	-0.053	-1.241***	-1.318***
	(0.170)	(0.154)	(0.173)	(0.193)	(0.241)	(0.132)	(0.122)	(0.139)	(0.140)	(0.308)	(0.127)	(0.112)	(0.139)	(0.139)	(0.239)
Intermediate	-1.018***	-0.869***	1.291***	-1.038***	0.336	0.056	0.047	1.625***	-0.540***	1.290***	-0.228	-0.134	1.344***	-0.684***	0.393*
	(0.181)	(0.170)	(0.185)	(0.218)	(0.224)	(0.133)	(0.128)	(0.143)	(0.149)	(0.274)	(0.128)	(0.115)	(0.138)	(0.141)	(0.220)
Above intermediate	0.433	0.165	3.118***	0.248	2.105***	1.298***	1.141***	3.172***	0.517	3.081***	1.232***	0.925***	2.890***	0.519	2.212***
	(0.332)	(0.336)	(0.303)	(0.380)	(0.356)	(0.296)	(0.285)	(0.283)	(0.328)	(0.399)	(0.303)	(0.282)	(0.289)	(0.332)	(0.383)
University+	0.187	0.393	3.458***	0.799***	2.258***	1.260***	1.302***	3.648***	0.893***	4.032***	1.022***	0.961***	3.243***	0.689***	2.803***
	(0.286)	(0.281)	(0.254)	(0.296)	(0.314)	(0.208)	(0.202)	(0.217)	(0.217)	(0.330)	(0.186)	(0.169)	(0.202)	(0.202)	(0.269)
Illiterate × Female	-0.910	-3.556***	-4.888***	-2.514***	-3.631***	1.203***	-2.324***	-3.784***	-1.352***	-2.141***	0.558*	-2.464***	-3.932***	-1.086**	-3.003***
	(0.579)	(0.454)	(0.376)	(0.641)	(0.381)	(0.357)	(0.304)	(0.279)	(0.450)	(0.417)	(0.293)	(0.257)	(0.272)	(0.474)	(0.339)
Reads & writes × Female	-1.129*	-2.807***	-4.430***	-1.832***	-1.794***	0.455	-1.488***	-3.270***	-1.477***	-2.805***	0.550	-1.727***	-3.021***	-2.066*	-1.490***
	(0.669)	(0.572)	(0.475)	(0.837)	(0.482)	(0.425)	(0.403)	(0.383)	(0.639)	(1.072)	(0.394)	(0.430)	(0.419)	(1.111)	(0.487)
Less than interm. × Female	0.351	-1.246***	-2.333***	-1.593*	-0.722**	1.901***	-0.301	-2.011***	0.116	0.054	1.253***	-0.629**	-1.983***	-0.188	-0.162
	(0.603)	(0.476)	(0.314)	(0.918)	(0.364)	(0.358)	(0.312)	(0.262)	(0.517)	(0.367)	(0.297)	(0.261)	(0.237)	(0.605)	(0.267)
Intermediate × Female	0.112	-0.046	0.087	0.326	0.723***	1.029***	0.083	-0.219	-0.515	1.079***	0.877***	-1.069***	-0.666***	0.042	0.798***
	(0.620)	(0.437)	(0.240)	(0.710)	(0.276)	(0.354)	(0.273)	(0.167)	(0.540)	(0.190)	(0.284)	(0.239)	(0.142)	(0.510)	(0.170)
Above interm. × Female	-15.093***	-0.183	-0.007	-14.179***	-0.160	-0.419	-0.321	-0.956***	-0.681	0.141	-1.003*	-0.882*	-1.209***	0.002	-0.279
	(0.639)	(0.640)	(0.369)	(0.673)	(0.421)	(0.595)	(0.456)	(0.322)	(0.895)	(0.366)	(0.597)	(0.454)	(0.321)	(0.799)	(0.374)
Household wealth	-0.107*	-0.397***	-0.264***	0.291***	-0.448***	-0.176***	-0.560***	-0.105***	0.153***	-0.373***	-0.158***	-0.368***	-0.041	0.372***	-0.243***
	(0.061)	(0.060)	(0.053)	(0.085)	(0.063)	(0.039)	(0.043)	(0.039)	(0.054)	(0.053)	(0.041)	(0.037)	(0.036)	(0.057)	(0.046)
Household size	0.023*	0.020	-0.027**	0.007	0.025*	0.076***	0.015	-0.033***	-0.056***	0.086***	0.041***	-0.064***	-0.129***	-0.080***	-0.017
	(0.013)	(0.013)	(0.013)	(0.019)	(0.015)	(0.010)	(0.010)	(0.012)	(0.015)	(0.014)	(0.012)	(0.012)	(0.013)	(0.017)	(0.015)
Female-headed hhd	0.103	0.520***	0.087	0.839***	0.448***	-0.105	0.323***	0.110	0.584***	0.562***	-0.292***	0.138**	-0.145*	0.465***	0.385***
	(0.139)	(0.114)	(0.119)	(0.197)	(0.112)	(0.080)	(0.080)	(0.084)	(0.118)	(0.088)	(0.082)	(0.070)	(0.074)	(0.116)	(0.077)
Highest yrs. of ed. in hhd.	-0.106***	-0.144***	-0.094***	-0.099***	-0.129***	-0.096***	-0.132***	-0.081***	-0.094***	-0.127***	-0.091***	-0.131***	-0.064***	-0.115***	-0.163***
	(0.014)	(0.014)	(0.015)	(0.020)	(0.019)	(0.009)	(0.011)	(0.012)	(0.013)	(0.020)	(0.009)	(0.010)	(0.012)	(0.014)	(0.018)
Father reads & writes	0.141	-0.168*	0.077	0.251**	-0.085	0.021	-0.277***	-0.029	0.033	0.022	0.077	-0.138**	0.206***	0.002	0.425***
	(0.097)	(0.090)	(0.082)	(0.127)	(0.102)	(0.067)	(0.070)	(0.066)	(0.090)	(0.097)	(0.074)	(0.067)	(0.066)	(0.100)	(0.085)
Father <intermediate	0.115	-0.368***	-0.007	-0.087	0.166	-0.118	-0.279***	0.066	-0.054	0.207**	-0.108	-0.298***	0.153**	0.034	0.384***
	(0.148)	(0.135)	(0.120)	(0.249)	(0.125)	(0.096)	(0.088)	(0.084)	(0.128)	(0.105)	(0.092)	(0.076)	(0.076)	(0.124)	(0.091)
Father intermediate+	-0.504**	-1.044***	-0.302***	-0.332	-0.405***	-0.419***	-1.044***	-0.375***	-0.431***	0.017	-0.661***	-1.099***	-0.186**	-0.427***	0.059
	(0.197)	(0.165)	(0.121)	(0.244)	(0.138)	(0.124)	(0.115)	(0.093)	(0.167)	(0.113)	(0.115)	(0.087)	(0.080)	(0.153)	(0.096)
Father university+	-0.903***	-1.563***	-0.841***	0.066	-1.026***	-1.229***	-1.576***	-0.455***	-0.280	-0.351**	-0.957***	-1.222***	-0.249**	-0.567***	0.043
	(0.304)	(0.251)	(0.162)	(0.275)	(0.194)	(0.213)	(0.181)	(0.115)	(0.201)	(0.149)	(0.178)	(0.130)	(0.106)	(0.201)	(0.126)
Father employer	1.037***	-0.701***	-0.281***	1.088***	-0.428***	0.772***	-0.419***	-0.146**	1.136***	-0.283***	0.854***	-0.186**	0.054	1.198***	-0.275***
	(0.094)	(0.107)	(0.085)	(0.126)	(0.110)	(0.059)	(0.068)	(0.063)	(0.082)	(0.094)	(0.061)	(0.060)	(0.059)	(0.080)	(0.083)
Father self-employed	0.598***	-0.242**	-0.198**	0.615***	-0.337***	0.558***	-0.302***	-0.087	0.379***	0.257**	0.527***	-0.357***	-0.297***	0.213*	-0.169
	(0.112)	(0.109)	(0.099)	(0.153)	(0.126)	(0.078)	(0.091)	(0.083)	(0.117)	(0.107)	(0.075)	(0.075)	(0.080)	(0.116)	(0.104)
Father unpaid fam. wrkr.	1.248***	-0.207	-0.251	0.954	-0.320	0.417	-0.243	-0.057	0.780	-0.867	0.980***	-0.361	-0.383	-0.543	-1.031
	(0.452)	(0.446)	(0.473)	(0.661)	(0.485)	(0.340)	(0.348)	(0.434)	(0.477)	(0.725)	(0.267)	(0.302)	(0.334)	(0.749)	(0.738)
Father non-employed	-0.240	-0.110	0.000	-0.173	-0.105	-0.715***	0.038	-0.077	-0.852*	0.422***	-0.351**	0.073	0.109	-0.461	0.591***
	(0.274)	(0.177)	(0.190)	(0.484)	(0.184)	(0.229)	(0.144)	(0.165)	(0.475)	(0.155)	(0.171)	(0.112)	(0.128)	(0.300)	(0.130)
Urban Lower	0.469***	0.278**	0.217**	0.471***	0.420***	0.355***	-0.095	-0.027	0.440***	0.392***	0.646***	0.309***	0.179**	0.641***	0.480***
	(0.128)	(0.113)	(0.099)	(0.160)	(0.115)	(0.099)	(0.091)	(0.082)	(0.126)	(0.101)	(0.106)	(0.090)	(0.083)	(0.139)	(0.100)
Rural Lower	0.544***	0.064	0.232**	0.533***	0.325***	0.317***	-0.271***	0.264***	0.704***	0.102	0.670***	0.248***	0.472***	0.964***	0.545***
	(0.125)	(0.111)	(0.102)	(0.161)	(0.118)	(0.088)	(0.081)	(0.075)	(0.112)	(0.100)	(0.092)	(0.076)	(0.072)	(0.119)	(0.088)
Urban Upper	0.437***	-0.082	0.559***	0.583***	0.125	0.662***	-0.281***	0.330***	0.806***	0.233**	0.543***	0.153*	0.336***	0.867***	0.286***
	(0.130)	(0.122)	(0.094)	(0.164)	(0.120)	(0.095)	(0.094)	(0.077)	(0.122)	(0.103)	(0.103)	(0.086)	(0.079)	(0.132)	(0.101)
Rural Upper	0.367**	-0.197	0.057	0.891***	-0.210	1.080***	-0.162*	0.352***	1.275***	-0.202	0.600***	0.044	0.191**	1.122***	-0.202*
	(0.145)	(0.129)	(0.124)	(0.176)	(0.156)	(0.093)	(0.095)	(0.090)	(0.123)	(0.129)	(0.097)	(0.081)	(0.083)	(0.127)	(0.110)
Constant	0.780***	2.523***	0.587**	-0.271	-0.012	-0.102	2.062***	-0.080	-0.056	-1.959***	0.022	2.668***	0.079	0.382*	-0.192
	(0.225)	(0.215)	(0.231)	(0.292)	(0.277)	(0.166)	(0.166)	(0.185)	(0.205)	(0.300)	(0.175)	(0.164)	(0.190)	(0.212)	(0.254)
Observations	13,856	13,856	13,856	13,856	13,856	22,737	22,737	22,737	22,737	22,737	28,389	28,389	28,389	28,389	28,389
Chi-squared	52913	52913	52913	52913	52913	11150	11150	11150	11150	11150	13058	13058	13058	13058	13058
P-value	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudo R-squared	0.368	0.368	0.368	0.368	0.368	0.348	0.348	0.348	0.348	0.348	0.353	0.353	0.353	0.353	0.353

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2b. Multinomial logit regressions by year, pooling youth & non-youth, Jordan

	2010					2016				
	Self-empl./Un paid family wrkr.	Informal+i rregular	Public + formal private	Employer	Unemploy ed	Self-empl./Un paid family wrkr.	Informal+i rregular	Public + formal private	Employer	Unemploy ed
Youth=1	-2.226***	-0.907***	-1.447***	-2.910***	-0.105	-1.534***	-0.782***	-1.012***	-2.266***	0.376***
	(0.142)	(0.108)	(0.070)	(0.252)	(0.103)	(0.156)	(0.107)	(0.062)	(0.273)	(0.081)
Age - min(age)	0.375***	0.361***	0.331***	0.359***	0.309***	0.238***	0.242***	0.199***	0.199***	0.153***
	(0.029)	(0.026)	(0.017)	(0.037)	(0.029)	(0.028)	(0.026)	(0.013)	(0.041)	(0.022)
Age - min(age) squared	-0.014***	-0.016***	-0.014***	-0.014***	-0.014***	-0.009***	-0.010***	-0.010***	-0.007***	-0.008***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Female=1	-3.617***	-2.473***	-1.971***	-3.440***	-0.860***	-3.339***	-1.656***	-1.328***	-3.321***	-0.038
	(0.499)	(0.424)	(0.167)	(0.585)	(0.211)	(0.608)	(0.288)	(0.105)	(0.732)	(0.132)
Reads & writes	2.342***	2.833***	2.488***	2.156***	2.792***	0.494*	0.207	0.772***	1.162**	0.346
	(0.380)	(0.268)	(0.236)	(0.523)	(0.363)	(0.281)	(0.227)	(0.197)	(0.556)	(0.239)
Less than intermediate	2.224***	2.070***	2.611***	2.203***	2.327***	0.200	0.454**	1.302***	0.794	0.131
	(0.362)	(0.246)	(0.205)	(0.507)	(0.332)	(0.289)	(0.230)	(0.191)	(0.552)	(0.236)
Intermediate	1.517***	0.988***	2.318***	1.589***	1.777***	-0.518	0.092	1.318***	0.688	-0.029
	(0.374)	(0.271)	(0.211)	(0.530)	(0.355)	(0.327)	(0.263)	(0.200)	(0.576)	(0.260)
University+	2.589***	1.625***	4.209***	2.334***	3.949***	-0.176	0.094	2.024***	0.781	1.157***
	(0.434)	(0.373)	(0.255)	(0.611)	(0.398)	(0.374)	(0.322)	(0.217)	(0.623)	(0.278)
Illiterate × Female	1.473**	0.378	-0.918*	-12.617***	-15.221***	-1.103	-1.512***	-1.969***	-11.545***	-2.658***
	(0.728)	(0.610)	(0.471)	(0.740)	(0.410)	(1.196)	(0.523)	(0.461)	(0.936)	(0.476)
Reads & writes × Female	-0.822	-2.417***	-2.524***	-15.848***	-4.036***	-1.456*	-2.280***	-2.322***	-1.081	-2.684***
	(0.595)	(0.509)	(0.281)	(0.622)	(0.492)	(0.846)	(0.497)	(0.260)	(1.045)	(0.296)
Less than interm. × Female	-0.752	-1.827***	-2.466***	-2.213***	-1.958***	-0.388	-2.199***	-2.273***	-1.269	-1.687***
	(0.563)	(0.478)	(0.222)	(0.832)	(0.268)	(0.686)	(0.404)	(0.172)	(1.031)	(0.195)
Intermediate × Female	-0.090	-0.847*	-0.798***	-0.776	-0.381	-0.893	-0.993***	-1.248***	-1.085	-0.689***
	(0.564)	(0.491)	(0.193)	(0.683)	(0.262)	(0.849)	(0.365)	(0.147)	(1.049)	(0.200)
Household wealth	0.100	-0.155***	-0.114***	0.884***	-0.366***	0.268***	-0.151**	0.118***	0.754***	-0.044
	(0.071)	(0.059)	(0.039)	(0.106)	(0.059)	(0.083)	(0.065)	(0.037)	(0.144)	(0.048)
Household size	-0.027	-0.067***	-0.084***	-0.059	0.015	-0.033	-0.084***	-0.105***	-0.088*	0.012
	(0.024)	(0.018)	(0.013)	(0.041)	(0.017)	(0.030)	(0.022)	(0.013)	(0.047)	(0.015)
Female-headed hhd	-0.461	0.348**	-0.158	-0.201	0.298**	-0.205	0.634***	-0.096	0.027	0.304**
	(0.308)	(0.161)	(0.120)	(0.485)	(0.146)	(0.355)	(0.171)	(0.119)	(0.517)	(0.138)
Highest yrs. of ed. in hhd.	-0.045*	-0.084***	0.006	-0.117***	-0.056**	-0.025	-0.084***	-0.000	-0.067*	-0.020
	(0.025)	(0.020)	(0.015)	(0.036)	(0.023)	(0.022)	(0.020)	(0.012)	(0.035)	(0.017)
Father reads & writes	-0.000	0.058	0.053	0.076	0.027	0.003	0.072	-0.129*	0.333*	-0.088
	(0.124)	(0.110)	(0.074)	(0.172)	(0.108)	(0.141)	(0.123)	(0.072)	(0.201)	(0.102)
Father <intermediate	-0.380	0.143	-0.332***	0.101	-0.237	0.100	0.126	-0.066	0.380	-0.112
	(0.293)	(0.175)	(0.122)	(0.422)	(0.165)	(0.191)	(0.148)	(0.084)	(0.261)	(0.112)
Father intermediate+	-0.110	-0.212	-0.511***	-0.239	-0.560***	-0.063	-0.157	-0.443***	0.133	-0.245**
	(0.197)	(0.159)	(0.100)	(0.280)	(0.149)	(0.234)	(0.175)	(0.095)	(0.339)	(0.123)
Father university+	-0.269	-0.633***	-0.825***	-1.325***	-0.690***	-0.213	-0.101	-0.920***	0.091	-0.695***
	(0.269)	(0.237)	(0.128)	(0.458)	(0.193)	(0.273)	(0.204)	(0.114)	(0.375)	(0.152)
Father employer	0.415**	0.304**	-0.255**	0.806***	-0.340*	0.734***	0.387*	-0.105	1.427***	0.126
	(0.177)	(0.145)	(0.105)	(0.205)	(0.176)	(0.231)	(0.215)	(0.132)	(0.252)	(0.179)
Father self-empl./unpaid fam. wrk	0.382***	-0.023	-0.205***	0.399**	0.038	0.740***	0.226*	-0.354***	0.227	-0.233**
	(0.120)	(0.105)	(0.073)	(0.165)	(0.103)	(0.147)	(0.131)	(0.084)	(0.215)	(0.118)
Father non-employed	0.524**	-0.085	0.170	0.418	0.256	-0.316**	-0.387***	-0.377***	-0.368	-0.193**
	(0.239)	(0.225)	(0.138)	(0.367)	(0.185)	(0.150)	(0.119)	(0.064)	(0.224)	(0.083)
Rural residence	0.026	-0.833***	0.176***	-0.572***	-0.011	-0.369**	-0.906***	0.075	-0.451*	-0.112
	(0.122)	(0.116)	(0.065)	(0.210)	(0.091)	(0.164)	(0.154)	(0.066)	(0.260)	(0.085)
North region	-0.217*	-0.575***	0.028	-0.341**	0.196**	-0.270**	-0.403***	0.443***	0.016	0.797***
	(0.112)	(0.096)	(0.063)	(0.161)	(0.094)	(0.126)	(0.106)	(0.059)	(0.170)	(0.082)
South region	-0.587***	-0.743***	0.586***	-0.288	0.961***	-1.276***	-1.224***	0.448***	-0.370	1.180***
	(0.185)	(0.160)	(0.084)	(0.262)	(0.112)	(0.229)	(0.195)	(0.079)	(0.278)	(0.095)
Round 2016										
Constant	-2.920***	-1.270***	-1.813***	-2.278***	-3.859***	-1.620***	-0.251	-0.585**	-2.667***	-2.289***
	(0.448)	(0.342)	(0.275)	(0.592)	(0.425)	(0.376)	(0.305)	(0.230)	(0.659)	(0.291)
Observations	12,965	12,965	12,965	12,965	12,965	12,522	12,522	12,522	12,522	12,522
Clusters										
Chi-squared	77210	77210	77210	77210	77210	22552	22552	22552	22552	22552
P-value	0	0	0	0	0	0	0	0	0	0
Pseudo R-squared	0.314	0.314	0.314	0.314	0.314	0.240	0.240	0.240	0.240	0.240

Table A3a. Multinomial logit regressions on year ELMPS98, separating youth & non-youth

	Youth					Non-youth				
	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed
Age - min(age)	0.145**	0.267***	0.568***	0.786***	0.168***	0.056**	-0.040	0.165***	0.139***	-0.051
	(0.062)	(0.045)	(0.077)	(0.218)	(0.055)	(0.025)	(0.026)	(0.020)	(0.029)	(0.035)
Age - min(age) squared	0.001	-0.005*	-0.014***	-0.026**	-0.007**	-0.004***	-0.002**	-0.006***	-0.006***	-0.001
	(0.004)	(0.003)	(0.004)	(0.012)	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Female=1	-1.960**	-0.987*	-0.292	-20.107***	0.120	-4.646***	-3.994***	-2.742***	-5.092***	-1.593**
	(0.784)	(0.546)	(0.290)	(2.192)	(0.319)	(0.798)	(0.613)	(0.311)	(0.603)	(0.646)
Reads & writes	-0.482	-0.110	0.582	-0.105	-0.306	-0.756**	-0.709**	0.555**	-0.602**	-0.586
	(0.378)	(0.324)	(0.452)	(0.680)	(0.455)	(0.297)	(0.289)	(0.278)	(0.292)	(0.444)
Less than intermediate	-1.985***	-1.569***	-0.852**	-1.146**	-1.721***	-0.038	-0.028	1.359***	-0.013	0.148
	(0.243)	(0.213)	(0.341)	(0.571)	(0.315)	(0.307)	(0.311)	(0.296)	(0.306)	(0.430)
Intermediate	-1.020***	-1.028***	0.064	-0.462	0.580*	-0.773**	-0.662**	1.894***	-0.786**	0.349
	(0.269)	(0.238)	(0.356)	(0.595)	(0.308)	(0.335)	(0.342)	(0.308)	(0.338)	(0.448)
Above intermediate	0.375	-0.337	2.024***	0.359	2.503***	-0.359	-0.564	2.427***	-0.560	0.229
	(0.454)	(0.438)	(0.467)	(0.879)	(0.447)	(0.544)	(0.561)	(0.481)	(0.544)	(0.734)
University+	-0.308	-0.498	2.101***	0.916	2.534***	-0.313	-0.106	2.984***	0.176	0.204
	(0.439)	(0.398)	(0.434)	(0.761)	(0.412)	(0.437)	(0.468)	(0.386)	(0.423)	(0.657)
Illiterate × Female	-2.041**	-4.454***	-5.374***	14.154***	-4.601***	0.152	-2.685***	-4.054***	-1.712**	-3.508***
	(0.849)	(0.651)	(0.748)	(2.253)	(0.589)	(0.825)	(0.674)	(0.465)	(0.687)	(0.735)
Reads & writes × Female	-2.570*	-3.434***	-19.390***	0.696	-2.223***	0.090	-2.103***	-3.228***	-0.841	-1.885**
	(1.335)	(0.818)	(0.509)	(2.169)	(0.698)	(0.894)	(0.874)	(0.528)	(0.868)	(0.850)
Less than interm. × Female	-0.831	-2.132***	-2.775***	2.816	-1.010**	-0.150	-2.708***	-2.915***	-2.128**	-18.289***
	(0.888)	(0.619)	(0.544)	(1.957)	(0.420)	(0.869)	(0.877)	(0.440)	(0.962)	(0.717)
Intermediate × Female	-0.805	-1.077*	-1.114***	15.975***	0.037	-0.504	-1.379	-0.129	0.149	-0.289
	(0.848)	(0.580)	(0.341)	(2.358)	(0.339)	(1.019)	(0.877)	(0.383)	(0.789)	(0.729)
Above interm. × Female	-17.013***	-0.917	-1.014**	1.048	-0.936*	-13.991***	-0.415	0.492	-13.697***	0.691
	(0.890)	(0.798)	(0.473)	(2.069)	(0.502)	(0.952)	(1.308)	(0.556)	(0.790)	(0.986)
Household wealth	-0.070	-0.298***	-0.221**	0.182	-0.340***	-0.229**	-0.631***	-0.391***	0.214**	-0.756***
	(0.091)	(0.075)	(0.087)	(0.192)	(0.070)	(0.089)	(0.108)	(0.081)	(0.108)	(0.153)
Household size	0.066***	0.064***	0.011	-0.079	0.038**	-0.049**	-0.063**	-0.081***	-0.032	-0.022
	(0.019)	(0.016)	(0.022)	(0.049)	(0.017)	(0.021)	(0.024)	(0.020)	(0.023)	(0.035)
Female-headed hhd	-0.072	0.516***	0.154	0.868***	0.444***	0.647***	0.993***	0.389**	1.077***	0.998***
	(0.218)	(0.131)	(0.156)	(0.325)	(0.126)	(0.185)	(0.241)	(0.188)	(0.271)	(0.268)
Highest yrs. of ed. in hhd.	-0.127***	-0.168***	-0.152***	-0.183***	-0.149***	-0.030	-0.051**	-0.012	-0.021	-0.042
	(0.025)	(0.021)	(0.029)	(0.058)	(0.025)	(0.019)	(0.023)	(0.019)	(0.024)	(0.032)
Father reads & writes	0.088	-0.011	0.184	0.526	-0.009	0.069	-0.466***	-0.083	0.079	-0.221
	(0.155)	(0.115)	(0.145)	(0.320)	(0.120)	(0.135)	(0.156)	(0.117)	(0.155)	(0.217)
Father <intermediate	0.210	-0.249	0.244	0.269	0.233*	0.151	-0.346	-0.025	-0.072	0.076
	(0.185)	(0.155)	(0.173)	(0.462)	(0.139)	(0.302)	(0.338)	(0.218)	(0.351)	(0.392)
Father intermediate+	-0.497*	-0.893***	-0.031	-0.504	-0.330**	0.009	-0.785**	-0.178	-0.032	-0.362
	(0.278)	(0.197)	(0.187)	(0.581)	(0.157)	(0.307)	(0.355)	(0.189)	(0.306)	(0.358)
Father university+	-0.712*	-1.458***	-0.315	0.029	-1.029***	-0.377	-0.992**	-0.805***	0.349	-0.415
	(0.415)	(0.316)	(0.237)	(0.640)	(0.222)	(0.492)	(0.477)	(0.234)	(0.361)	(0.506)
Father employer	1.747***	-0.654***	-0.411**	1.698***	-0.240*	0.412***	-0.782***	-0.399**	0.822***	-0.827***
	(0.143)	(0.143)	(0.165)	(0.320)	(0.129)	(0.139)	(0.174)	(0.115)	(0.154)	(0.250)
Father self-employed	0.453**	-0.133	-0.357*	1.119***	-0.393***	0.586***	-0.372**	-0.154	0.555***	-0.262
	(0.212)	(0.145)	(0.183)	(0.388)	(0.149)	(0.143)	(0.172)	(0.135)	(0.183)	(0.251)
Father unpaid fam. wrkr.	1.724***	-0.171	-0.812	-16.526***	-0.519	0.030	-1.187	-0.415	0.750	0.128
	(0.495)	(0.470)	(0.889)	(0.548)	(0.514)	(0.820)	(1.068)	(0.611)	(0.691)	(1.047)
Father non-employed	-0.104	0.080	0.075	0.100	-0.043	0.599	0.203	0.609	0.413	0.249
	(0.338)	(0.187)	(0.241)	(0.771)	(0.193)	(0.604)	(0.578)	(0.515)	(0.761)	(0.807)
Urban Lower	0.414*	0.277*	-0.185	0.087	0.336**	0.727***	0.423**	0.502***	0.771***	0.600**
	(0.218)	(0.146)	(0.167)	(0.440)	(0.134)	(0.174)	(0.196)	(0.140)	(0.196)	(0.239)
Rural Lower	0.626***	0.102	-0.052	0.364	0.376***	0.611***	0.032	0.329**	0.640***	0.005
	(0.211)	(0.142)	(0.166)	(0.427)	(0.136)	(0.177)	(0.198)	(0.151)	(0.203)	(0.263)
Urban Upper	0.509**	-0.190	0.083	0.798**	0.113	0.573***	0.178	0.881***	0.792***	-0.043
	(0.212)	(0.160)	(0.149)	(0.384)	(0.138)	(0.185)	(0.210)	(0.139)	(0.205)	(0.283)
Rural Upper	0.616***	-0.213	-0.473**	1.174***	-0.083	0.256	-0.149	0.262	0.905***	-0.877**
	(0.227)	(0.165)	(0.216)	(0.392)	(0.175)	(0.217)	(0.229)	(0.186)	(0.230)	(0.383)
Constant	-1.029***	0.870***	-2.445***	-5.160***	-0.427	1.757***	3.918***	1.254***	0.665*	1.464***
	(0.360)	(0.294)	(0.520)	(1.121)	(0.367)	(0.316)	(0.338)	(0.309)	(0.360)	(0.470)
Observations	6,673	6,673	6,673	6,673	6,673	7,183	7,183	7,183	7,183	7,183
Chi-squared						56895	56895	56895	56895	56895
P-value						0	0	0	0	0
Pseudo R-squared	0.302	0.302	0.302	0.302	0.302	0.404	0.404	0.404	0.404	0.404

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A3b. Multinomial logit regressions on year ELMPS06, separating youth & non-youth

	Youth					Non-youth				
	Self-empl./Un paid family wrkr.	Informal+i rregular	Public + formal private	Employer	Unemploy ed	Self-empl./Un paid family wrkr.	Informal+i rregular	Public + formal private	Employer	Unemploy ed
Age - min(age)	0.192***	0.399***	0.671***	0.629***	0.219***	0.079***	0.054***	0.225***	0.178***	-0.013
	(0.038)	(0.038)	(0.072)	(0.113)	(0.055)	(0.016)	(0.020)	(0.015)	(0.020)	(0.037)
Age - min(age) squared	-0.002	-0.013***	-0.020***	-0.015**	-0.011***	-0.004***	-0.005***	-0.007***	-0.006***	-0.003*
	(0.002)	(0.002)	(0.004)	(0.006)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Female=1	-4.246***	-3.271***	-1.910***	-5.263***	-1.474***	-3.692***	-3.834***	-2.580***	-4.779***	-1.878***
	(0.549)	(0.285)	(0.184)	(1.037)	(0.192)	(0.438)	(0.527)	(0.229)	(0.476)	(0.349)
Reads & writes	-0.116	0.216	1.005**	-0.134	0.461	0.164	0.214	0.917***	0.006	0.491
	(0.334)	(0.288)	(0.395)	(0.440)	(0.524)	(0.279)	(0.269)	(0.262)	(0.263)	(0.606)
Less than intermediate	-1.162***	-1.028***	-0.240	-1.046***	-1.258***	0.080	0.013	0.983***	-0.326	0.318
	(0.191)	(0.172)	(0.287)	(0.273)	(0.395)	(0.228)	(0.221)	(0.216)	(0.221)	(0.491)
Intermediate	-0.089	-0.218	0.919***	-0.746**	1.415***	0.487**	0.453*	2.186***	-0.063	0.838*
	(0.193)	(0.180)	(0.292)	(0.296)	(0.354)	(0.244)	(0.246)	(0.237)	(0.245)	(0.497)
Above intermediate	0.874**	1.013***	2.926***	0.897*	3.523***	0.805*	0.288	2.340***	-0.500	0.652
	(0.444)	(0.388)	(0.441)	(0.545)	(0.506)	(0.416)	(0.426)	(0.389)	(0.441)	(0.809)
University+	0.845***	1.031***	2.816***	0.376	4.162***	0.556*	-0.026	2.892***	0.064	1.964***
	(0.293)	(0.266)	(0.354)	(0.413)	(0.417)	(0.323)	(0.349)	(0.302)	(0.319)	(0.608)
Illiterate × Female	1.786***	-2.285***	-4.514***	-0.706	-2.044***	0.901*	-2.119***	-3.420***	-1.253**	-2.689***
	(0.583)	(0.405)	(1.053)	(1.214)	(0.552)	(0.467)	(0.575)	(0.343)	(0.516)	(0.666)
Reads & writes × Female	1.442**	-0.951*	-3.342***	-12.735***	-2.111*	-0.118	-1.917***	-2.990***	-1.430**	-14.932***
	(0.698)	(0.517)	(1.093)	(1.120)	(1.118)	(0.555)	(0.746)	(0.455)	(0.695)	(0.629)
Less than interm. × Fema	2.641***	-0.116	-1.092***	1.034	-0.024	0.138	-1.596**	-2.957***	-0.889	-1.619**
	(0.571)	(0.369)	(0.413)	(1.276)	(0.454)	(0.496)	(0.632)	(0.366)	(0.597)	(0.667)
Intermediate × Female	1.499***	0.275	-0.384*	0.014	1.003***	-0.133	-1.241**	-0.809**	-1.269**	0.656
	(0.567)	(0.311)	(0.226)	(1.261)	(0.217)	(0.499)	(0.604)	(0.286)	(0.634)	(0.459)
Above interm. × Female	-0.622	-0.265	-1.213***	0.482	0.013	-0.449	-0.308	-0.572	-0.812	0.478
	(1.228)	(0.562)	(0.448)	(1.528)	(0.442)	(0.736)	(0.832)	(0.440)	(1.192)	(0.838)
Household wealth	-0.174***	-0.444***	0.005	0.336***	-0.277***	-0.173***	-0.730***	-0.155***	0.087	-0.661***
	(0.055)	(0.054)	(0.063)	(0.110)	(0.059)	(0.054)	(0.073)	(0.053)	(0.069)	(0.132)
Household size	0.104***	0.049***	0.029*	-0.150***	0.113***	0.058***	0.003	-0.039**	-0.014	0.017
	(0.013)	(0.014)	(0.018)	(0.036)	(0.015)	(0.015)	(0.021)	(0.017)	(0.019)	(0.040)
Female-headed hhd	-0.142	0.268***	0.015	0.296	0.527***	0.190	0.839***	0.534***	1.136***	0.917***
	(0.113)	(0.094)	(0.117)	(0.188)	(0.098)	(0.119)	(0.177)	(0.133)	(0.171)	(0.236)
Highest yrs. of ed. in hhd.	-0.093***	-0.149***	-0.130***	-0.127***	-0.146***	-0.051***	-0.049***	-0.008	-0.024	0.003
	(0.015)	(0.016)	(0.023)	(0.028)	(0.024)	(0.012)	(0.017)	(0.016)	(0.016)	(0.041)
Father reads & writes	0.048	-0.189**	-0.270**	0.063	0.034	0.022	-0.405***	0.073	0.072	-0.016
	(0.099)	(0.091)	(0.115)	(0.176)	(0.112)	(0.094)	(0.121)	(0.090)	(0.114)	(0.206)
Father <intermediate	-0.099	-0.207**	0.147	-0.414*	0.265**	0.074	-0.108	0.173	0.245	0.217
	(0.122)	(0.105)	(0.124)	(0.230)	(0.117)	(0.159)	(0.181)	(0.124)	(0.175)	(0.258)
Father intermediate+	-0.367**	-0.971***	-0.432***	-0.559*	0.007	0.217	-0.559**	0.097	0.152	0.354
	(0.158)	(0.136)	(0.138)	(0.290)	(0.127)	(0.220)	(0.257)	(0.150)	(0.234)	(0.288)
Father university+	-1.161***	-1.525***	-0.327**	-1.112***	-0.292*	-0.566	-1.091***	-0.192	0.567**	-0.426
	(0.270)	(0.210)	(0.162)	(0.411)	(0.167)	(0.371)	(0.412)	(0.181)	(0.275)	(0.399)
Father employer	1.085***	-0.327***	-0.325***	1.108***	-0.263**	0.546***	-0.422***	-0.054	1.188***	-0.236
	(0.085)	(0.086)	(0.108)	(0.155)	(0.106)	(0.086)	(0.117)	(0.086)	(0.107)	(0.219)
Father self-employed	0.475***	-0.211*	-0.062	0.680***	0.303**	0.581***	-0.364**	-0.077	0.330**	0.111
	(0.127)	(0.120)	(0.146)	(0.237)	(0.124)	(0.103)	(0.145)	(0.108)	(0.142)	(0.235)
Father unpaid fam. wrkr.	0.602	-0.472	-0.395	1.422*	-0.761	0.146	0.039	0.096	0.289	-13.341***
	(0.410)	(0.444)	(0.696)	(0.796)	(0.753)	(0.563)	(0.595)	(0.646)	(0.674)	(0.446)
Father non-employed	-0.614**	0.169	0.058	-0.193	0.410**	-0.015	0.472	0.172	-1.371	1.677***
	(0.271)	(0.155)	(0.198)	(0.537)	(0.168)	(0.456)	(0.467)	(0.418)	(1.081)	(0.505)
Urban Lower	0.464***	-0.078	-0.264**	0.256	0.384***	0.442***	-0.062	0.157	0.638***	0.305
	(0.163)	(0.115)	(0.125)	(0.270)	(0.115)	(0.131)	(0.162)	(0.114)	(0.157)	(0.227)
Rural Lower	0.514***	-0.408***	-0.115	0.774***	0.060	0.401***	0.079	0.592***	0.938***	0.039
	(0.142)	(0.103)	(0.113)	(0.222)	(0.114)	(0.122)	(0.143)	(0.108)	(0.143)	(0.218)
Urban Upper	0.942***	-0.350***	-0.236*	0.990***	0.173	0.704***	-0.005	0.750***	1.049***	0.254
	(0.150)	(0.119)	(0.127)	(0.233)	(0.118)	(0.131)	(0.163)	(0.107)	(0.156)	(0.244)
Rural Upper	1.199***	-0.276**	-0.260*	1.244***	-0.334**	1.242***	0.161	0.900***	1.638***	0.078
	(0.148)	(0.117)	(0.140)	(0.236)	(0.144)	(0.132)	(0.172)	(0.134)	(0.163)	(0.325)
Constant	-1.992***	0.338	-3.707***	-3.781***	-2.355***	0.294	2.284***	-0.297	-0.159	-1.410***
	(0.267)	(0.255)	(0.457)	(0.628)	(0.405)	(0.219)	(0.245)	(0.233)	(0.249)	(0.539)
Observations	11,741	11,741	11,741	11,741	11,741	10,996	10,996	10,996	10,996	10,996
Chi-squared	14548	14548	14548	14548	14548	24182	24182	24182	24182	24182
P-value	0	0	0	0	0	0	0	0	0	0
Pseudo R-squared	0.303	0.303	0.303	0.303	0.303	0.359	0.359	0.359	0.359	0.359

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A3c. Multinomial logit regressions on year ELMPS12, separating youth & non-youth

	Youth					Non-youth				
	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed
Age - min(age)	0.279***	0.476***	1.159***	0.758***	0.475***	0.095***	0.034**	0.150***	0.113***	-0.040
	(0.043)	(0.037)	(0.096)	(0.149)	(0.060)	(0.016)	(0.016)	(0.013)	(0.019)	(0.026)
Age - min(age) squared	-0.004	-0.012***	-0.038***	-0.020**	-0.021***	-0.004***	-0.004***	-0.004***	-0.004***	-0.002
	(0.003)	(0.002)	(0.005)	(0.008)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Female=1	-3.894***	-3.557***	-1.950***	-18.145***	-1.085***	-4.599***	-5.069***	-3.272***	-5.826***	-2.289***
	(0.367)	(0.232)	(0.149)	(0.226)	(0.164)	(0.401)	(0.381)	(0.225)	(0.472)	(0.299)
Reads & writes	-0.208	-0.259	0.184	-0.873	-0.106	0.215	0.300	1.061***	0.149	0.546
	(0.377)	(0.355)	(0.513)	(0.638)	(0.559)	(0.320)	(0.296)	(0.309)	(0.308)	(0.504)
Less than intermediate	-1.128***	-1.022***	-0.694**	-1.282***	-1.463***	0.089	-0.054	0.870***	-0.347*	-0.104
	(0.217)	(0.197)	(0.313)	(0.338)	(0.339)	(0.201)	(0.188)	(0.198)	(0.201)	(0.361)
Intermediate	-0.838***	-0.803***	0.067	-0.912***	-0.371	0.863***	0.666***	2.292***	0.077	1.314***
	(0.223)	(0.203)	(0.301)	(0.325)	(0.318)	(0.221)	(0.214)	(0.219)	(0.226)	(0.356)
Above intermediate	0.587	0.383	1.731***	-0.143	1.144**	0.841*	0.116	2.288***	-0.092	1.928***
	(0.444)	(0.386)	(0.449)	(0.689)	(0.523)	(0.445)	(0.434)	(0.421)	(0.458)	(0.583)
University+	0.192	-0.054	1.365***	-0.042	1.717***	0.651**	0.180	2.790***	0.055	2.008***
	(0.292)	(0.257)	(0.347)	(0.446)	(0.370)	(0.302)	(0.293)	(0.286)	(0.306)	(0.462)
Illiterate × Female	-0.061	-3.879***	-4.215***	11.510***	-3.477***	1.448***	-0.930**	-2.770***	-0.204	-2.287***
	(0.446)	(0.420)	(0.680)	(0.711)	(0.500)	(0.428)	(0.424)	(0.343)	(0.513)	(0.500)
Reads & writes × Female	0.189	-3.237***	-3.425***	-0.256	-1.515**	0.987*	-0.568	-2.208***	-1.525	-1.540*
	(0.636)	(0.850)	(1.083)	(0.680)	(0.674)	(0.554)	(0.594)	(0.511)	(1.143)	(0.792)
Less than interm. × Fem;	1.319***	-1.342***	-1.892***	12.823***	-0.583*	0.675	-0.565	-2.107***	-0.627	-0.828**
	(0.413)	(0.340)	(0.422)	(1.057)	(0.332)	(0.458)	(0.465)	(0.339)	(0.669)	(0.494)
Intermediate × Female	0.902**	-1.430***	-1.221***	13.254***	0.530***	-0.003	-1.450***	-0.995***	-0.765	0.162
	(0.392)	(0.290)	(0.201)	(0.513)	(0.196)	(0.452)	(0.460)	(0.279)	(0.592)	(0.367)
Above interm. × Female	-1.104	-1.038*	-1.600***	13.814***	-0.198	-0.542	-0.816	-0.455	0.119	-0.215
	(0.900)	(0.533)	(0.430)	(1.198)	(0.482)	(0.826)	(0.911)	(0.472)	(0.962)	(0.614)
Household wealth	-0.136**	-0.289***	0.000	0.199	-0.197***	-0.163***	-0.465***	-0.020	0.421***	-0.257***
	(0.062)	(0.050)	(0.057)	(0.127)	(0.057)	(0.055)	(0.060)	(0.048)	(0.071)	(0.087)
Household size	0.087***	-0.029*	-0.112***	-0.149***	0.002	0.018	-0.044**	-0.103***	-0.042**	-0.028
	(0.016)	(0.016)	(0.023)	(0.044)	(0.018)	(0.018)	(0.020)	(0.018)	(0.021)	(0.031)
Female-headed hhd	-0.319***	0.220**	-0.031	0.707***	0.352***	0.017	0.463***	0.184*	0.714***	0.857***
	(0.121)	(0.087)	(0.112)	(0.190)	(0.096)	(0.111)	(0.133)	(0.100)	(0.157)	(0.143)
Highest yrs. of ed. in hhc	-0.105***	-0.166***	-0.071**	-0.151***	-0.128***	-0.016	-0.002	0.041***	-0.013	-0.082***
	(0.017)	(0.017)	(0.026)	(0.035)	(0.025)	(0.012)	(0.014)	(0.015)	(0.016)	(0.030)
Father reads & writes	0.126	-0.109	0.231*	0.077	0.352***	0.049	-0.163	0.211**	-0.016	0.541***
	(0.116)	(0.097)	(0.119)	(0.213)	(0.112)	(0.098)	(0.103)	(0.085)	(0.121)	(0.138)
Father <intermediate	-0.122	-0.048	0.390***	0.171	0.514***	0.012	-0.495***	0.104	0.012	0.276*
	(0.130)	(0.097)	(0.125)	(0.244)	(0.113)	(0.140)	(0.140)	(0.107)	(0.161)	(0.165)
Father intermediate+	-0.431***	-0.852***	0.024	-0.273	0.163	-0.296	-0.619***	0.150	0.035	0.240
	(0.143)	(0.107)	(0.123)	(0.279)	(0.116)	(0.207)	(0.180)	(0.123)	(0.207)	(0.195)
Father university+	-0.950***	-1.028***	0.127	-1.434***	0.160	-0.030	-0.435*	0.003	0.231	0.179
	(0.250)	(0.165)	(0.153)	(0.529)	(0.148)	(0.277)	(0.241)	(0.160)	(0.255)	(0.276)
Father employer	1.269***	-0.142*	-0.141	1.209***	-0.301***	0.613***	-0.133	0.144*	1.247***	-0.142
	(0.091)	(0.084)	(0.107)	(0.175)	(0.106)	(0.084)	(0.092)	(0.076)	(0.099)	(0.139)
Father self-employed	0.509***	-0.254**	-0.364**	0.294	-0.058	0.538***	-0.475***	-0.274***	0.188	-0.391**
	(0.123)	(0.105)	(0.142)	(0.248)	(0.128)	(0.099)	(0.119)	(0.104)	(0.140)	(0.186)
Father unpaid fam. wrkr	1.470***	-0.265	-0.848	-14.616***	-0.593	0.267	-0.743	-0.528	-0.685	-12.515***
	(0.357)	(0.382)	(0.677)	(0.357)	(0.750)	(0.395)	(0.544)	(0.425)	(0.804)	(0.364)
Father non-employed	-0.401*	0.135	0.272	0.457	0.581***	0.051	0.157	0.032	-1.080**	0.880***
	(0.238)	(0.135)	(0.170)	(0.375)	(0.151)	(0.271)	(0.254)	(0.236)	(0.514)	(0.288)
Urban Lower	0.574***	0.106	-0.389***	0.426	0.192	0.912***	0.632***	0.570***	0.988***	0.931***
	(0.187)	(0.128)	(0.134)	(0.304)	(0.127)	(0.135)	(0.140)	(0.109)	(0.168)	(0.167)
Rural Lower	0.741***	0.117	0.060	0.683**	0.360***	0.883***	0.554***	0.814***	1.317***	0.901***
	(0.166)	(0.108)	(0.114)	(0.265)	(0.109)	(0.120)	(0.121)	(0.099)	(0.146)	(0.153)
Urban Upper	0.749***	-0.006	-0.120	0.449	0.096	0.658***	0.488***	0.712***	1.258***	0.680***
	(0.176)	(0.121)	(0.129)	(0.300)	(0.125)	(0.137)	(0.136)	(0.105)	(0.162)	(0.180)
Rural Upper	0.768***	-0.062	-0.417***	0.705**	-0.302**	0.686***	0.269**	0.593***	1.476***	-0.100
	(0.168)	(0.112)	(0.136)	(0.280)	(0.132)	(0.131)	(0.135)	(0.115)	(0.158)	(0.206)
Constant	-1.892***	0.677**	-6.111***	-4.302***	-2.048***	-0.077	2.268***	-0.504**	-0.045	-0.151
	(0.329)	(0.298)	(0.646)	(0.878)	(0.477)	(0.209)	(0.210)	(0.218)	(0.237)	(0.346)
Observations	14,049	14,049	14,049	14,049	14,049	14,340	14,340	14,340	14,340	14,340
Chi-squared	39237	39237	39237	39237	39237	10447	10447	10447	10447	10447
P-value	0	0	0	0	0	0	0	0	0	0
Pseudo R-squared	0.345	0.345	0.345	0.345	0.345	0.354	0.354	0.354	0.354	0.354

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A3d. Multinomial logit regressions on JLMPS10, separating youth & non-youth

	Youth					Non-youth				
	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed
Age - min(age)	0.767***	0.761***	1.144***	1.513***	0.844***	0.101***	0.042	-0.001	0.056	0.032
	(0.136)	(0.072)	(0.062)	(0.320)	(0.066)	(0.031)	(0.031)	(0.020)	(0.038)	(0.035)
Age - min(age) squared	-0.026***	-0.031***	-0.047***	-0.064***	-0.043***	-0.005***	-0.005***	-0.004***	-0.004***	-0.004***
	(0.008)	(0.004)	(0.004)	(0.018)	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Female=1	-4.154***	-4.130***	-3.425***	-4.675***	-2.172***	-5.363***	-3.357***	-2.563***	-3.773***	-1.456***
	(0.370)	(0.217)	(0.114)	(0.770)	(0.123)	(1.036)	(0.702)	(0.263)	(0.620)	(0.436)
Reads & writes	1.567**	3.139***	2.139***	1.824	16.271***	1.482***	1.278***	1.347***	1.205**	0.555
	(0.738)	(0.494)	(0.502)	(1.282)	(0.187)	(0.436)	(0.375)	(0.339)	(0.563)	(0.441)
Less than intermediate	1.844***	2.362***	2.980***	1.705	16.084***	1.551***	1.032***	1.539***	1.483***	0.730*
	(0.692)	(0.481)	(0.471)	(1.242)	(0.163)	(0.432)	(0.378)	(0.335)	(0.558)	(0.439)
Intermediate	0.397	0.975*	2.354***	0.513	15.569***	1.481***	0.585	1.890***	1.472**	0.960**
	(0.736)	(0.505)	(0.476)	(1.379)	(0.198)	(0.448)	(0.407)	(0.342)	(0.582)	(0.466)
University+	2.526***	2.344***	4.857***	1.320	18.500***	1.686***	0.442	2.853***	1.374**	1.511**
	(0.813)	(0.586)	(0.506)	(1.539)	(0.290)	(0.528)	(0.557)	(0.410)	(0.686)	(0.592)
Illiterate × Female						3.180***	0.763	-0.840	-13.315***	-17.387***
						(1.181)	(0.871)	(0.581)	(0.805)	(0.592)
Reads & writes × Female						1.587	-0.924	-1.566***	-15.168***	-3.079***
						(1.083)	(0.769)	(0.348)	(0.656)	(0.757)
Less than interm. × Female						0.916	-1.297*	-2.273***	-2.069**	-1.985***
						(1.081)	(0.763)	(0.328)	(0.949)	(0.525)
Intermediate × Female						1.147	-1.351*	-1.025***	-1.127	-1.054**
						(1.075)	(0.802)	(0.294)	(0.731)	(0.496)
Household wealth	0.141	0.113	-0.030	0.541***	-0.286***	0.217**	-0.246**	0.044	1.109***	-0.341***
	(0.132)	(0.079)	(0.059)	(0.191)	(0.073)	(0.090)	(0.099)	(0.062)	(0.127)	(0.109)
Household size	0.075*	0.054**	0.097***	0.013	0.109***	-0.020	-0.080***	-0.107***	-0.027	-0.044
	(0.040)	(0.025)	(0.018)	(0.111)	(0.020)	(0.031)	(0.031)	(0.022)	(0.045)	(0.035)
Female-headed hhd	-0.358	0.219	-0.053	0.378	0.430**	-0.242	1.021***	0.198	-1.101	0.012
	(0.458)	(0.207)	(0.171)	(0.592)	(0.169)	(0.441)	(0.289)	(0.217)	(1.060)	(0.411)
Highest yrs. of ed. in hhd.	-0.096*	-0.120***	-0.035	-0.115	-0.034	0.023	0.004	0.072***	-0.060	0.002
	(0.056)	(0.031)	(0.025)	(0.088)	(0.031)	(0.029)	(0.028)	(0.021)	(0.041)	(0.034)
Father reads & writes	0.023	-0.018	0.003	0.188	-0.055	-0.080	0.014	-0.027	-0.029	0.141
	(0.307)	(0.180)	(0.122)	(0.574)	(0.145)	(0.139)	(0.145)	(0.098)	(0.186)	(0.171)
Father <intermediate	0.116	0.208	-0.049	-0.021	-0.193	-0.588	1.021	0.517	1.727**	1.153**
	(0.382)	(0.222)	(0.163)	(0.773)	(0.191)	(1.061)	(0.666)	(0.437)	(0.675)	(0.563)
Father intermediate+	-0.007	-0.313	-0.433***	-0.368	-0.614***	-0.007	-0.066	-0.491***	-0.035	-0.652*
	(0.359)	(0.219)	(0.149)	(0.669)	(0.180)	(0.258)	(0.267)	(0.165)	(0.323)	(0.364)
Father university+	-0.185	-0.788**	-0.676***	-1.061	-0.843***	-0.088	-0.391	-0.797***	-1.202**	-0.500
	(0.466)	(0.313)	(0.187)	(1.013)	(0.227)	(0.380)	(0.439)	(0.244)	(0.565)	(0.486)
Father employer	0.770**	0.378*	-0.365**	1.227***	-0.595***	0.250	0.124	-0.247	0.724***	-0.086
	(0.330)	(0.198)	(0.180)	(0.472)	(0.230)	(0.217)	(0.231)	(0.147)	(0.242)	(0.289)
Father self-empl./unpaid fa	0.655***	0.183	-0.039	0.021	0.073	0.248*	-0.275*	-0.310***	0.378**	-0.038
	(0.252)	(0.149)	(0.114)	(0.499)	(0.133)	(0.141)	(0.157)	(0.103)	(0.187)	(0.173)
Father non-employed	1.064***	-0.012	0.361**	-0.069	0.282	0.147	-0.296	-0.258	0.194	0.131
	(0.408)	(0.299)	(0.172)	(1.042)	(0.217)	(0.310)	(0.358)	(0.242)	(0.433)	(0.362)
Rural residence	0.056	-1.206***	0.147	-0.943	-0.150	0.132	-0.393**	0.277***	-0.403*	0.284*
	(0.246)	(0.175)	(0.094)	(0.586)	(0.113)	(0.148)	(0.164)	(0.103)	(0.233)	(0.162)
North region	-0.948***	-0.550***	-0.008	-0.008	0.062	-0.076	-0.644***	-0.056	-0.430**	0.374**
	(0.246)	(0.135)	(0.096)	(0.404)	(0.116)	(0.136)	(0.147)	(0.097)	(0.186)	(0.171)
South region	-1.642***	-0.751***	0.445***	-0.181	0.744***	-0.243	-0.749***	0.766***	-0.157	1.238***
	(0.519)	(0.223)	(0.124)	(0.663)	(0.139)	(0.212)	(0.242)	(0.129)	(0.293)	(0.201)
Constant	-6.348***	-4.293***	-7.841***	-10.115***	-20.258***	-1.766***	0.397	0.259	-0.942	-1.394**
	(1.096)	(0.635)	(0.633)	(1.754)	(0.424)	(0.535)	(0.500)	(0.401)	(0.682)	(0.549)
Observations	6,830	6,830	6,830	6,830	6,830	6,135	6,135	6,135	6,135	6,135
Chi-squared						50749	50749	50749	50749	50749
P-value						0	0	0	0	0
Pseudo R-squared	0.357	0.357	0.357	0.357	0.357	0.316	0.316	0.316	0.316	0.316

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A3e. Multinomial logit regressions on JLMPS16, separating youth & non-youth

	Youth					Non-youth				
	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed	Self-empl./Unpaid family wrkr.	Informal+irregular	Public + formal private	Employer	Unemployed
Age - min(age)	0.847***	0.683***	0.932***	0.843**	0.800***	0.079***	0.067**	0.020	0.066	-0.105***
	(0.171)	(0.105)	(0.070)	(0.382)	(0.073)	(0.030)	(0.030)	(0.016)	(0.044)	(0.025)
Age - min(age) squared	-0.030***	-0.027***	-0.037***	-0.037	-0.039***	-0.004***	-0.005***	-0.004***	-0.003**	0.000
	(0.009)	(0.006)	(0.004)	(0.019)	(0.004)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Female=1	-4.260***	-2.887***	-2.660***	-16.155***	-1.136***	-3.281***	-1.631***	-1.495***	-3.408***	-0.176
	(0.601)	(0.205)	(0.100)	(0.272)	(0.097)	(0.616)	(0.407)	(0.147)	(0.739)	(0.263)
Reads & writes	1.311**	0.293	1.320***	15.384***	0.541*	0.390	0.291	0.715***	1.025*	0.523
	(0.622)	(0.350)	(0.372)	(0.793)	(0.310)	(0.318)	(0.290)	(0.243)	(0.571)	(0.345)
Less than intermediate	0.685	0.552	1.926***	15.101***	0.394	0.041	0.314	0.977***	0.434	0.057
	(0.659)	(0.359)	(0.361)	(0.741)	(0.302)	(0.323)	(0.293)	(0.237)	(0.570)	(0.356)
Intermediate	-0.639	0.083	1.546***	14.281***	0.087	-0.410	0.264	1.314***	0.650	0.460
	(0.771)	(0.423)	(0.376)	(1.049)	(0.321)	(0.364)	(0.328)	(0.250)	(0.594)	(0.379)
University+	-0.303	0.763	2.611***	14.668***	1.858***	-0.307	-0.361	1.820***	0.512	0.556
	(0.873)	(0.489)	(0.399)	(1.325)	(0.346)	(0.424)	(0.427)	(0.277)	(0.651)	(0.442)
Illiterate × Female						-0.939	-1.279**	-1.656***	-12.103***	-2.412***
						(1.206)	(0.641)	(0.489)	(0.957)	(0.600)
Reads & writes × Female						-1.163	-2.545***	-2.024***	-0.874	-2.575***
						(0.857)	(0.672)	(0.302)	(1.056)	(0.440)
Less than interm. × Female						-0.420	-2.140***	-2.028***	-0.869	-1.773***
						(0.721)	(0.542)	(0.225)	(1.039)	(0.359)
Intermediate × Female						-0.891	-1.604***	-1.137***	-1.036	-1.083***
						(0.858)	(0.516)	(0.194)	(1.059)	(0.339)
Household wealth	0.122	-0.217**	0.176***	1.014***	0.047	0.350***	-0.072	0.146***	0.777***	-0.063
	(0.208)	(0.109)	(0.062)	(0.383)	(0.064)	(0.092)	(0.083)	(0.049)	(0.160)	(0.079)
Household size	0.083	-0.004	-0.023	-0.092	0.060***	0.004	-0.060*	-0.060***	-0.045	0.062**
	(0.060)	(0.032)	(0.020)	(0.146)	(0.018)	(0.032)	(0.032)	(0.019)	(0.051)	(0.029)
Female-headed hhd	0.293	0.824***	-0.010	-0.007	0.257	-0.940	0.751***	0.057	0.217	0.584**
	(0.449)	(0.230)	(0.186)	(1.082)	(0.177)	(0.740)	(0.289)	(0.184)	(0.604)	(0.239)
Highest yrs. of ed. in hhd.	0.011	-0.111***	0.005	-0.115	0.023	-0.013	-0.056**	0.015	-0.050	-0.018
	(0.050)	(0.036)	(0.021)	(0.124)	(0.023)	(0.025)	(0.024)	(0.015)	(0.038)	(0.026)
Father reads & writes	-0.198	0.197	-0.193	0.404	-0.213	-0.054	-0.008	-0.178**	0.275	0.004
	(0.344)	(0.242)	(0.136)	(0.891)	(0.143)	(0.154)	(0.146)	(0.085)	(0.207)	(0.145)
Father <intermediate	-0.163	0.415*	0.044	0.279	-0.169	0.112	0.012	-0.146	0.347	0.048
	(0.377)	(0.252)	(0.138)	(0.974)	(0.148)	(0.226)	(0.204)	(0.114)	(0.280)	(0.179)
Father intermediate+	-0.823	0.270	-0.265*	0.383	-0.300*	0.321	-0.390	-0.487***	0.054	-0.085
	(0.522)	(0.280)	(0.155)	(1.083)	(0.160)	(0.257)	(0.275)	(0.138)	(0.392)	(0.225)
Father university+	-0.866	0.079	-0.961***	-1.294	-0.955***	0.387	0.221	-0.579***	0.678*	-0.078
	(0.571)	(0.333)	(0.196)	(1.627)	(0.199)	(0.313)	(0.290)	(0.167)	(0.380)	(0.276)
Father employer	1.207***	0.874***	-0.314	1.447*	0.015	0.796***	0.206	0.119	1.556***	0.381
	(0.465)	(0.300)	(0.254)	(0.761)	(0.237)	(0.272)	(0.309)	(0.170)	(0.276)	(0.287)
Father self-empl./unpaid fam	1.048***	0.493**	-0.317**	-0.076	-0.333**	0.806***	0.227	-0.228**	0.361	0.078
	(0.302)	(0.212)	(0.152)	(0.842)	(0.165)	(0.171)	(0.170)	(0.104)	(0.227)	(0.174)
Father non-employed	-0.753**	-0.313	-0.176*	-0.355	-0.186*	-0.088	-0.323**	-0.381***	-0.314	0.051
	(0.342)	(0.189)	(0.102)	(0.711)	(0.105)	(0.172)	(0.159)	(0.090)	(0.243)	(0.147)
Rural residence	-0.693*	-1.155***	0.192*	0.444	-0.034	-0.257	-0.711***	0.042	-0.605**	-0.206
	(0.389)	(0.257)	(0.103)	(0.573)	(0.108)	(0.185)	(0.196)	(0.089)	(0.292)	(0.148)
North region	-0.531*	-0.298*	0.357***	0.176	0.626***	-0.211	-0.504***	0.429***	-0.015	1.012***
	(0.280)	(0.163)	(0.097)	(0.574)	(0.104)	(0.144)	(0.143)	(0.079)	(0.185)	(0.143)
South region	-1.489***	-0.919***	0.381***	0.442	1.100***	-1.279***	-1.479***	0.400***	-0.546*	1.211***
	(0.540)	(0.287)	(0.123)	(0.685)	(0.119)	(0.259)	(0.268)	(0.106)	(0.312)	(0.163)
Constant	-7.602***	-3.887***	-6.684***	-21.464***	-5.728***	-1.168***	0.340	0.067	-2.184***	-1.588***
	(1.085)	(0.708)	(0.528)	(2.617)	(0.522)	(0.424)	(0.384)	(0.287)	(0.681)	(0.422)
Observations	5,356	5,356	5,356	5,356	5,356	7,166	7,166	7,166	7,166	7,166
Chi-squared	6158	6158	6158	6158	6158	21542	21542	21542	21542	21542
P-value	0	0	0	0	0	0	0	0	0	0
Pseudo R-squared	0.255	0.255	0.255	0.255	0.255	0.251	0.251	0.251	0.251	0.251

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1