THE MAKING OF A LOST GENERATION: CHILD LABOR AMONG SYRIAN REFUGEES IN TURKEY

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Child Labor among Syrian Refugees in Turkey[*]

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June 10, 2021

Abstract

Millions of children are forcibly displaced around the world, making child labor a serious risk. However, little is known about this topic due to the difficulty of finding representative datasets for this population and information on child labor. In this study, we use a representative dataset on Syrian refugees in Turkey, the largest refugee group in any single country, to examine the incidence of child labor and its determinants. The incidence of paid work is remarkably high among boys: 17.4% of 12-14 year-olds and 45.1% of 15-17 year-olds are in paid employment. We find that paid work is positively associated with poverty, proficiency in Turkish, living in an industrialized region in Turkey, originating from rural areas in Syria and living in a household with a young, female, or less-educated head. Family composition matters more for girls' employment than boys'. Boys' (girls') employment increases if their father (mother) is alive – suggesting network effects. Being older at arrival is highly associated with child labor, indicating that difficulty with school integration drives children into employment.

Keywords: child labor; forced displacement; Syrian refugees; paid work; migrants; Turkey

JEL Codes: J13; J15; J61; O15; O53

1. Introduction

Globally, the number of forcibly displaced children reached 31 million as of the end of 2018 (UNICEF, 2020). Of these, nearly 14 million are refugees. UNICEF estimates that while less than 5% of adults who live in a country other than where they were born are refugees, this figure reaches a third among children. The single biggest contributor to the recent upsurge in the number of child refugees – a 119% increase from 2010 to 2018 – is the war in Syria. Since its start in 2011, nearly 6 million Syrians had to seek refuge in neighboring countries: Turkey, Jordan and Lebanon and to a lesser extent Iraq and Egypt. Nearly half are children.

Several studies point to a high child labor risk among Syrian refugee children in neighboring countries.[1] Moreover, many of these child laborers work in strenuous and exploitative conditions,[2] with significant long-term adverse consequences as reported in the literature.[3] Most of the Syrian child laborers do not attend school; for instance, in Turkey, less than 3% of child workers aged 12-17 are enrolled in school. This implies that they might be trapped in poverty in the long run.[4] In fact, UNICEF (2014) highlights the risk of a "*lost generation*" among Syrian refugees.

This paper describes the patterns of child labor among Syrian refugees in Turkey and examines the association between child labor and a rich set of socioeconomic factors, using a representative dataset. The context of our study is highly important because Turkey hosts the highest number of refugees in the world. As of 2018, there were 3.6 million Syrian refugees in Turkey, most of whom live in non-camp urban areas. For our empirical analysis, we use the 2018 round of the Turkey Demographic Health Survey (TDHS), which for the first time included a special module on Syrian refugees (TDHS-S). To the best of our knowledge, this is the first survey that provides a representative sample of Syrian refugees in Turkey and includes a very rich set of variables on their socioeconomic characteristics, including information on their migration history and origins

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[1] UNHCR, 2013; Save the Children, 2015; UNICEF, 2015; Habib et al., 2019; Maadad and Matthews, 2020; de Hoop et al., 2019.

[2] Habib et al., 2019; UNICEF, 2015; Küppers and Ruhmann, 2016; UNHCR, 2016.

[3] See Baland and Robison (2000) and Beegle et al. (2009) for children's human capital accumulation; Emerson et al. (2017) for learning outcomes; O'Donnell et al. (2005) and Habib et al. (2019) for health outcomes; and Emerson and Souza (2011) and Beegle et al. (2009) for future labor market outcomes.

[4] Kırdar et al. (2021) find that school enrollment rates drop for the same ages when paid employment rates rise among Syrian refugee boys in Turkey.

in Syria. We use a multivariate regression analysis in assessing the association between various individual and household-level factors and children's propensity for paid employment. The heterogeneity in these associations by gender and age group (12-14 and 15-17) is also analyzed.

As primary causes of child labor, the literature points to poverty, income shocks and limited access to schooling.[5] The latter may have been an issue for refugee children in Turkey in the early years of the conflict given that a systematic approach towards their education was not adopted. This changed in the 2013-2014 school year with the establishment of Temporary Education Centers (TECs) for Syrian children and their acceptance to public schools a year later. Kırdar et al. (2021) find that once the differences in socioeconomic characteristics are accounted for, no difference exists in the school enrollment of Syrian children who arrive in Turkey at or before age eight and native children. The gap, however, persists for refugee children arriving when older. These findings suggest that the refugee-native schooling gap is more to do with integration problems than supply bottlenecks. Children who arrive at later ages have difficulty integrating to the schooling system due to war-induced interruptions in schooling, frequent changes in place of residence and the language barrier.

On the other hand, poverty and adverse income shocks are likely to force Syrian refugee households to use child labor as a coping mechanism. Many Syrian households suffered dramatic declines in income, having lost their immovable assets to the war or left them behind and had to quit their income generating activities.[6] Most Syrian adult workers are employed in the informal sector for low wages, partly due to legal restrictions on formal employment. This not only means that they have lower earnings but they also face higher income shocks due to the precarious nature of their jobs. Labor market related shocks that adversely affect adult household members are also found to increase children's employment risk.[7] Moreover, female labor force participation rates

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[5] In the seminal work by Basu and Van (1998), families put their children to work when their income falls below subsistence level. Empirical evidence suggests that children of poorer households face a higher risk of employment (Edmonds, 2010). Negative income shocks due to crop failure (Beegle et al., 2006) are shown to increase child labor, while positive shocks reduce it (Edmonds and Pavnick, 2005).

[6] The World Bank (2017) estimates lost housing to be $4.5-5.5 billion in three cities: Aleppo, Idlib and Hama.

[7] See, for instance, Di Maio and Nandi (2013) for Palestine, Duryea et al. (2007) for Brazil, and Guarcello et al. (2010) for Guatemala. In contrast, Skoufias and Parker (2002, 2006) find for Mexico that, controlling for household characteristics, the transition of the household head from employed to unemployed does not significantly impact teens' labor force participation but increases adult women's labor supply.

are very low for Syrian refugees, which increases the risk of using child labor as a coping mechanism.

Using the 2018 TDHS-S, we calculate that the incidence of child labor among Syrian refugees is remarkably high among boys. The employment rate of boys aged 12-14 is 17.4%, while that of boys aged 15-17 is 45.1%.[8] In comparison, girls' employment rates are 4.7% and 8.1%, respectively, for the same groups. Our analysis of the 2009 Syria Family Health Survey (SFHS-2009) and the 2006 Multiple Indicators Survey (MICS-2006) of Syria shows that while the incidence of child labor in pre-war Syria was not low (20.6% among boys aged 15-17), employment rates for all age groups rose significantly after their arrival in Turkey.

Our empirical analysis of the factors associated with child labor show that refugee children who arrive in Turkey after age 8 are much more likely to be employed than early arrivers—which is consistent with the finding of Kırdar et al. (2021) that age-of-arrival is a critical factor for school integration of refugee children. While the incidence of child labor is lower in the first year of residence, no difference is observed across other years. In other words, it takes about a year after arrival until refugee children enter the labor market in significant numbers. Not surprisingly, higher levels of household wealth and education of the household head are associated with a lower probability of child labor, pointing to the role of poverty in child labor among refugees. Other household characteristics that increase the child labor risk are having a young or female household head. In terms of origin characteristics, refugee children originating from villages in Syria are more likely to work. Finally, we find that demand matters substantially. In Istanbul and Eastern Marmara regions, the most industrial regions of Turkey, the probability of child labor is about 20 percentage points higher than that in other urban regions (holding other variables constant).

When we examine the associations by gender, we find that whether or not the father is alive is highly and positively associated with boys' employment, whereas whether or not the mother is alive is positively associated with girls' employment. This suggests networking effects as well as work sharing. Another interesting finding from our analysis by gender is that household composition matters much more for girls' employment than boys'. In particular, girls' employment is negatively associated with the number of adult males and the number of elderly individuals in

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[8] The 45.1% employment rate of boys aged 15-17 is even more remarkable when compared to the 60.1% employment rate of 18-59-year-old adult Syrian men.

the household. While the former finding suggests that the availability of other wage earners reduces the need for girls to work, the latter finding implies that elderly household members increase the opportunity cost of employment more for girls than boys given the traditional gender roles. Language ability turns out to be highly associated with boys' paid employment but not girls'. Boys whose native language is Arabic or Kurdish are less likely to be employed than boys who speak Turkish (e.g. the Turkmen from Syria). In our analysis by children's age group, the patterns are overall similar. The key differences in the associations by age group concern educational attainment and the age of the household head. In households where the head is young or less educated, younger children (12-14 age group) are much more likely to work.

To the best of our knowledge, this is the first study that does this description using a *representative* dataset and the first to establish the factors that increase the risk of child labor in the context of the *largest* refugee group in any single country. Most studies in the literature on forced migration consider their impact on host societies (for a review, see Becker and Ferrara, 2019; Maystadt et al., 2019; Ruiz and Vargas-Silva, 2013; Verme and Schuettler, 2021 and references therein). In contrast, little evidence exists regarding child labor among refugees at scale. The only other study that looks at child labor using a nationally representative dataset, to the best of our knowledge, is Krafft et al. (2018). Using the 2016 Jordan Labor Market Panel Survey (JLMPS), they find that only 2% of Syrian refugee boys aged 10-14 are employed (compared to 17.4% for boys aged 12–14 in our context).[9] That study, however, does not examine the factors that increase the risk of child labor.

Our study is also important in the way that it provides guidance on targeting of policies aimed at improving the living conditions of refugees. One major policy being implemented since 2017 is the Emergency Social Safety Net (ESSN) Program, which provides cash transfers to refugee households provided that they fulfill certain criteria. Among the criteria are female headship and number of dependents, which we find to be associated with child labor. We, however, also find educational level and age of the household head, the origins of Syrian refugees, and the age of children at arrival to be highly associated with child labor, but these variables are not part of the ESSN criteria.

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[9] Based on a survey of camp residents in the Bekaa valley of Lebanon (an agricultural area), Habib (2019) finds that 65% of children aged 4-18 are employed.

The remainder of the paper is organized as follows. Section 2 provides background information. Section 3 describes the data and the empirical approach. The results are presented in Section 4. Section 5 concludes the paper.

2. Background information

The conflict in Syria started in March 2011. By April 2011, the first group of Syrian refugees had already arrived in Turkey. Initially, they were settled in camps along the border with Syria but as the numbers escalated and the war was prolonged, many moved out of the camps. By the end of 2018, there were 3.6 million Syrian refugees in Turkey, of which 1.6 million were children under the age of 18 and 1.1 million were school age children (5-17). At the time, less than 5% of refugees lived in camps (DGMM, 2021; Refugees Association, 2021).[10] Initially, children in camps were schooled within camp premises with the initiative of camp administrators. A more systematic approach was adopted in the 2013-2014 school year with the establishment of Temporary Education Centers (TECs), which were later opened in off-camp areas. TECs followed the Syrian school curriculum and taught in Arabic.[11] In the 2014-15 school year, Syrian families were given the option of enrolling their children in public schools. A gradual transfer of Syrian students from TECs to public schools was also planned. As of the 2019-2020 school year, all TECs are closed and the transfer of Syrian children to public schools is nearly completed (MoNE, 2021).

Whether in camps or not, Syrian refugee children and their families receive various types of social assistance. The biggest program geared towards Syrian refugees is the Emergency Social Safety Net (ESSN) program under the EU Facility for Refugees in Turkey. Notwithstanding national and international efforts, poverty remains widespread among the refugee population. Over three quarters of the Syrian refugee population are in the bottom wealth quantile.

Children younger than 15 are not allowed to work in Turkey. However, neither Syrian children aged 15-17 nor adults can formally work unless they have a work permit. Until 2016, obtaining a

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[10] The number of Syrians in Turkey was 170,912 at the end of 2012. Their arrival accelerated after this date and their number increased to 506,129 at the end of 2013 and reached 2,503,549 by the end of 2015.

[11] The curriculum was designed by the Ministry of Education of the Syrian Interim Government and modified by the Turkish MoNE. Fifteen hours per week of Turkish language lessons were added to their program in the 2016-2017 school year (Emin, 2016).

work permit was not possible because under the Turkish law Syrians fleeing the war are not recognized as refugees but people under 'temporary protection'. A regulation passed in 2016 made it possible for Syrian refugees to obtain work permits but to date, only 116 thousand work permits have been issued (Refugees Association, 2020). Nonetheless, the TDHS-S data suggest that nearly 60% of adult Syrian men work for pay in Turkey, the overwhelming majority (98.5%) do so informally (Özgören and Aslan, 2021). Informal employment, while providing a means for income, pays little. ILO (2021) suggests that Syrian workers work for long hours (over 45 hours per week) but earn less than the minimum wage.

Before the release of the 2018 TDHS-S, a few studies examined the employment of Syrian refugee children in Turkey using small samples. Yalçın (2016), based on data collected by a humanitarian organization, notes that 15% of households in Şanlıurfa province, 24% in Hatay and 33% in Istanbul have at least one working child aged 15-17. Harunoğulları (2016), based on qualitative data on 62 working Syrian children aged 8-17 and their families in Kilis, finds that nearly 9 out of 10 children are not in school and 70% of the families depend on their children's work for their livelihoods. Lordoğlu and Aslan (2019), in a qualitative survey with 165 children aged 6-18 in three different cities (Şanlıurfa, Mardin and İstanbul), find that 44% of children are employed. They work in the service sector in restaurants, bakeries and grocery shops but also in textile manufacturing. Some children are doing petty trade and collecting recyclable items.

3. Data and Empirical Methodology

The data used come from the 2018 Turkey Demographic and Health Survey Syrian Migrant module (2018 TDHS-S), conducted as part of the 2018 TDHS. Representative of the Syrian population in Turkey, TDHS-S covers 1,826 refugee households residing both in camps and outside of camps. The sampling frame relies on the refugee registration system maintained by the Directorate General of Migration Management (DGMM).[12] A multi-stage stratified sampling is used in the selection of sample households. The response rate is 95% (HUIPS, 2019). We mainly rely on the TDHS-S for empirical analysis but also use 2009 Syria Family Health Survey (SFHS)

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[12] The share of unregistered Syrian refugees is very low, as DGMM makes a serious effort to register all Syrian refugees entering Turkey. In addition, the fact that all assistance activities for Syrian refugees are subject to registration minimizes non-registration.

and 2006 Multiple Indicators Survey (MICS) as complementary data sets to provide background information on Syrian children before they arrived in Turkey.

The 2018 TDHS-S collected considerable information on demographic and socio-economic characteristics of sample households, including the paid employment status of household members aged 12 and over. Since our target group consists of children, we restrict our sample to 12-17-year-olds. The 2018 TDHS-S includes 1,460 children in this age group. As the vast majority of Syrian refugees migrated to Turkey with their families, the number of unaccompanied children is very limited.

In analyzing the correlates of child labor, we use a linear probability model where the dependent variable is paid employment among refugee children. In line with the child labor literature, we consider individual and household characteristics of children as main determinants. Individual characteristics include age and gender of the child, relationship of the child to the household head, age at arrival and number of years since arrival in Turkey, mother tongue (Turkmen, Arabic, Kurdish, other), place of birth (province center, district center and sub-district/village) and province of birth. Household characteristics include household wealth, household composition, survival status of mother and father, and sex, age and education level of the household head. Household wealth is constructed using ownership of household assets and housing amenities.[13] We, then, generate deciles of wealth using both refugee and native samples.[14] Deciles higher than five are combined under the fifth decile because of the low number of cases in these deciles. The household composition variables include, all in logarithmic form (log(x+1)): number of adult men and women (aged 18-59), number of elderly (above 65) and number of children [(i) under age 7, (ii) aged 7-14, (iii) aged 15-17]. We also include regional controls (at NUTS-1 level) and controls for type of location (urban and camp).

Since direct controls for employment status of family members – which are jointly determined with children's employment – would be clearly endogenous, we account for the potential workers

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[13] Household wealth is constructed by tallying 11 different household assets and housing amenities that are defined as dichotomous variables.

[14] While most refugees have much less wealth than natives, the distribution of wealth for refugees has a long right tail. Hence, if we were to divide only the refugee population into groups, say quintiles, the highest quintile would be very heterogeneous.

using the number of family members in various age groups. For the same reason, we do not include direct controls for children's schooling status.

Apart from estimations for the whole sample, we carry out separate analyses for girls and boys and for younger (aged 12-14) and older (aged 15-17) children. Considering that more than one child may come from the same household, errors are clustered at the household-level. Sampling weights are used throughout the analysis.

3.1 Descriptive Statistics

Figure 1 shows paid employment rates in panel (A) and school enrollment rates in panel (B) according to age and gender. For girls, the paid employment rate changes little by age; 4.7% for ages 12-14 and 8.1% for 15-17. For boys, however, not only are the levels much higher but they also increase at a much faster pace by age. While only 17.4% of 12-14-year-old boys are employed, a remarkable 45.1% of 15-17-year-olds are. Panel (B) suggests a correlation between school drop-out and employment take-up among boys. Whenever a sharp drop occurs in school drop-outs, a sharp rise is observed in employment (see, for instance, those aged 12-13 and 14-15). No such correlation is observed among girls. As girls drop out from school, they do not appear to be entering the labor market in large numbers. Only a very small fraction of children in our sample (8 of 1,460 children) are enrolled in school and also have paid jobs.

The data collected in pre-war Syria suggest much lower paid employment rates for 12-14 and 15-17 year-olds when compared to data from TDHS-S in the post-conflict period in Turkey. According to MICS-2006, only 4.2% of Syrian children aged 12-14 were in paid employment. The employment rate was again higher among boys than girls with 6.9% of boys holding a paid job compared to 1.6% of girls. For children aged 15-17, the SFHS-2009 shows that the prevalence of paid employment was 18.6% in Syria. Again, distinctly higher rates were observed among boys with 20.6% compared to 3.6% for girls.

When we examine Syrian adult women's employment rate, we find that while it was not particularly high in pre-war Syria (estimated at 12.9% in 2009 based on SFHS-2009), it fell even further in Turkey. According to the 2018 THDS-S, the employment rate of 18- to 59-year-old Syrian women is only 5.9%, which is actually lower than the employment rate of girls aged 15-17.

The low adult female employment rate raises the importance of child labor as a coping mechanism among refugee households.

Table 1 presents the basic descriptive statistics based on 2018 TDHS-S separately for the total sample and employed children. The mean age at arrival of refugee children is 10.5, with over three quarters arriving after age 8. The average size of a Syrian household in our sample is 8. On average, the household head is 44.3 years old and has 6.6 years of education. Judged on the basis of the wealth index, 45% of children are in the bottom decile.

4. Determinants of child labor

4.1 All children

We present the estimation results in Table 2 for four different specifications, which differ primarily by how age at arrival and years since arrival are specified. Due to perfect collinearity between age, age at arrival and years since arrival, using all three variables requires restrictions. Therefore, age and age-at-arrival dummies are used in the first specification and only age and years-since-arrival dummies in the second specification. The results on age-at-arrival and years-since arrival dummies (provided in Figure A1 of the Appendix) show that, controlling for age, children who arrive after age 8 have a higher likelihood of employment than those who arrive at an earlier age and children who are in their first year of residence in Turkey are less likely to be employed than those with longer duration of residence. Therefore, we generate an indicator variable for age at arrival that takes the value of one for those who arrive after age 8 and zero otherwise, and an indicator variable for years since arrival that takes the value of one after one year in Turkey and zero otherwise. The restrictions imposed on the combined structure (such as arrival at age 9 and 10 have the same effect) solve the perfect collinearity problem, and in specification three we use both indicator variables as well as age dummies. The fourth specification adds control variables for place and province of birth to specification three. We prefer to add these in a separate specification because these variables tend to wash out the effects of many other variables due to high correlation.

Table 2 shows that children who arrive after age 8 are 5.9 percentage points more likely to be engaged in paid work than those who arrive at age 8 or earlier. This finding is likely to result from differences in children's school enrollment by age at arrival. Examining the factors that explain native-refugee differences in school enrollment, Kırdar et al. (2021) find that (controlling for

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several background characteristics) refugee children who arrive at or before age 8 display no differences in school enrollment than native children, whereas refugee children who arrive later lag behind. In terms of years since arrival, Table 2 indicates that refugee children are about 12 percentage points less likely to be in paid work in their first year of residence than later years. This is expected as it takes time for refugees to acclimatize to their new surroundings and find jobs. Age by gender effects (provided in Figure A2 of the Appendix), even after controlling for other variables, display similar patterns to those in Figure 1. The gender employment gap becomes remarkable at higher ages; for instance, among 17-year-olds, boys are 40 percentage points more likely to work than girls.

The household wealth decile dummy variables in Table 2 indicate that children living in households with higher wealth are less likely to participate in paid employment. The negative coefficient for the fourth wealth decile is statistically significant at the 10% level (after accounting for several variables that are correlated with wealth, such as the education level of the household head). While the coefficient of the dummy for the fifth and higher deciles of wealth is either marginally significant or not statistically significant at conventional levels, the magnitude of the coefficient is larger than that of the fourth wealth decile.

In terms of household composition, only the number of children under age 7 is associated with the paid employment of 12- to 17-year-old children. Each child under age 7 is associated with a 4-4.2 percentage point rise in paid employment. This suggests that a higher dependency ratio in the household raises the need for making older children work as a coping mechanism. When the father is alive, the coefficients are consistently positive and large in magnitude, but marginally statistically insignificant at conventional levels. The positive coefficients suggest network effects for children in finding work.

Table 2 also shows that children's paid work monotonically decreases with household head's education level. Children in households where the head has attained education beyond secondary school (junior high) are about 10 percentage points less likely to be in paid jobs than children in households where the head has no education. Suggestive evidence (that is either marginally statistically insignificant or weakly statistically significant) exists that children's paid work is more likely when the household head is female. In terms of the age of the household head, compared to the baseline group of young household heads (aged 15-29), heads in other age groups are less

likely to have children working. While this is not statistically significant at conventional levels, the coefficient magnitudes are large. Table 2 also indicates that children whose mother tongue is Arabic or Kurdish are less likely to have paid jobs than children whose mother tongue is Turkish, pointing out the importance of language skills in securing jobs. The evidence for this finding is weaker, though, as the coefficients are either statistically significant at the 10% level or marginally statistically insignificant.

Table 2 further indicates that living in the two most industrial regions of the country (Istanbul and Eastern Marmara) is associated with a much higher likelihood of refugee children working in a paid job. Moreover, this association is quantitatively large. Refugee children in these two regions are 20-30 percentage points more likely to be in paid jobs. This suggests that the demand for child labor matters. This finding, however, could also partly result from the sorting of refugee families with a higher propensity toward child labor into these regions. Finally, characteristics of the origin region in Syria also matter in children's employment. Children originating from villages have an 8.2 percentage point higher probability of holding a paid job compared to those from province centers.

4.2 Results by gender

The estimation results for separate samples of boys and girls are provided in Table 3. A number of variables affect the employment probability of boys and girls similarly, however the magnitude of the effects is higher for boys due to their higher levels of paid employment. These variables are household wealth, female household head and region of residence in Turkey. The patterns of the associations of these variables with paid employment for both girls and boys are similar to those reported in the previous section for the total child population.

For some variables, however, the association with paid employment is much stronger for boys than for girls. These include age at arrival, years since arrival, father alive, education level of household head and language. Age at arrival and years since arrival have almost no effect for girls, whereas the likelihood of paid employment is about 13% higher for boys who arrive after age 8 than boys

who arrive younger. Unlike the findings for the total sample and for boys,[15] education level of the household head does not seem to matter for girls' employment. In addition, compared to Turkish-speaking refugees, Arabic-speaking and Kurdish-speaking boys (but not girls) are less likely to be in paid employment, which illustrates the importance of host-country language competence in securing jobs for boys. In fact, Arabic-speaking boys are 18-19 percentage points less likely to be in paid employment than Turkish-speaking boys.[16]

While the father being alive matters for boys' employment, the mother being alive matters for girls' employment. In fact, boys are almost 15 percentage points more likely to work when their fathers are alive and girls are about 7 percentage points more likely to work when their mothers are alive. These findings suggest networking effects as well as work sharing; it is likely that boys work in the same workplace with their fathers and girls with their mothers. For girls, mother's presence in the household may also mean that there is less demand on their time at home, freeing them for paid work.

Some variables, on the contrary, matter more in girls' paid employment than boys'. An interesting one is household composition. The existence of adult males is associated with a lower employment probability for girls but not for boys. In fact, each adult male is associated with about a 9 percentage point drop in the employment probability of girls. In other words, the availability of adult laborers matters for girl's, but not for boys', employment. Similarly, the existence of elderly in the household is associated with a lower probability of girls' paid employment. This is expected because, in the traditional separation of work by gender, care work falls more heavily on girls, increasing the opportunity cost of paid work more than for boys'. The results also indicate that when the household head is young (aged 18-29), the probability of employment rises more for girls than for boys. Similarly, originating from villages in Syria increases the employment probability more for girls than boys.

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[15] For boys whose household heads have education above secondary school, paid employment probability is 15 percentage points lower than boys whose household heads have no education.

[16] Arabic and Kurdish are working languages for some natives. According to TDHS-2018, the mother-tongue is Kurdish for 15% of the host community population and Arabic for 3%.

4.3 Results by age group

Since Figure 1 shows highly different employment rates for the 12-14 and 15-17 age groups (especially for boys), we conduct our analysis for these age groups separately, the results of which are given in Table 4. For several variables, the patterns of the associations with paid employment are similar for the two age groups, as discussed under the main findings. These variables include age at arrival, years since arrival, household wealth, female household head, language ability, demand conditions (region of residence in Turkey) and village status of the origin region in Syria. Note that, for these variables, the magnitudes of the associations are higher for the older age group as the levels of paid employment are higher.

The association of some variables with paid employment, however, is stronger for the younger age group. First, the existence of elderly in the household has a negative association with paid employment of younger children but not of older children. This might suggest that while younger children help out in taking care of the elderly, older children are put to market work. Second, education level of the household head is strongly associated with younger children's paid employment status, whereas it almost does not matter for older children. Among younger children, those whose heads have above secondary education are 15-17 percentage points less likely to be in paid employment than those whose heads have no education. Third, young household heads are a much higher risk factor for younger children than older children. Quantitatively, when the household head is below 30 years of age, the employment probability of 12- to 14-year-olds is at least 20 percentage points higher. The only factor that matters more in older children's employment probability is whether or not the father is alive. This factor is associated with a 20 percentage point rise in employment probability for older children.

5. Conclusion

In this paper, using representative micro data, we examined child labor among the largest refugee group in a single country. We find that Syrian refugee children in Turkey have a remarkably high probability of paid employment: 45.1% of 15- to 17-year-old and 17.4% of 12- to 14-year-old boys are in paid employment. Although the corresponding rates among girls are lower – 4.7% among 12-to 14-year-olds and 8.1% among 15- to 17-year-olds – they are nonetheless significant.

Furthermore, only 3% of employed children are in school. The arrival of refugees substantially exacerbates the child labor problem that already exists among natives in Turkey (Dayıoğlu and Kırdar, 2020).

Our examination of the correlates of child labor among refugee children suggests that Syrian households use child labor as a coping mechanism. Although the employment rate among adult men is high, due to the nature of jobs held, income earned is low. Syrian women's labor market participation is traditionally low, but their employment rate in Turkey is even lower than the pre-war level in Syria. In the absence of labor supply adjustment on the part of adult women, high rates of poverty push children into the labor market. Our finding that children who arrive in Turkey after age 8 have a higher likelihood of paid employment suggests that integration difficulties at school contribute to the factors that push children into paid work. Child labor among refugees is also positively associated with Turkish language ability, living in industrialized regions in Turkey, originating from villages in Syria, having a female or young or less-educated household head and the survival status of parents.

The Emergency Social Safety Net (ESSN) Program implemented in Turkey – the largest humanitarian program for refugees in the world – is an important step for improving the living conditions of refugees. The high child employment rates we observe occur in spite of this program, which is found to reduce child labor significantly (Aygün et al., 2021). Our results suggest ways to improve the targeting of this program. Observable characteristics of refugee households such as educational level and age of the household head, their origins in Syria, and the age composition of children at arrival, which we find to be highly associated with child labor, could be included as part of the ESSN criteria.

The current high rates of child labor among a refugee population where 46% are under 18, as well as the strenuous and exploitative conditions they frequently find themselves in, have worrisome long-term adverse implications for these children. The risk is a lost generation of children with low human capital and health outcomes. It also implies the potential failure to integrate the host and refugee populations and the risk of future social conflicts, at a time when the integration of refugees in Turkey has become highly important as the protracted nature of the Syrian war makes their return to Syria unlikely.

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Figure 1 Fractions of Syrian Refugee Children in Paid Employment and in School
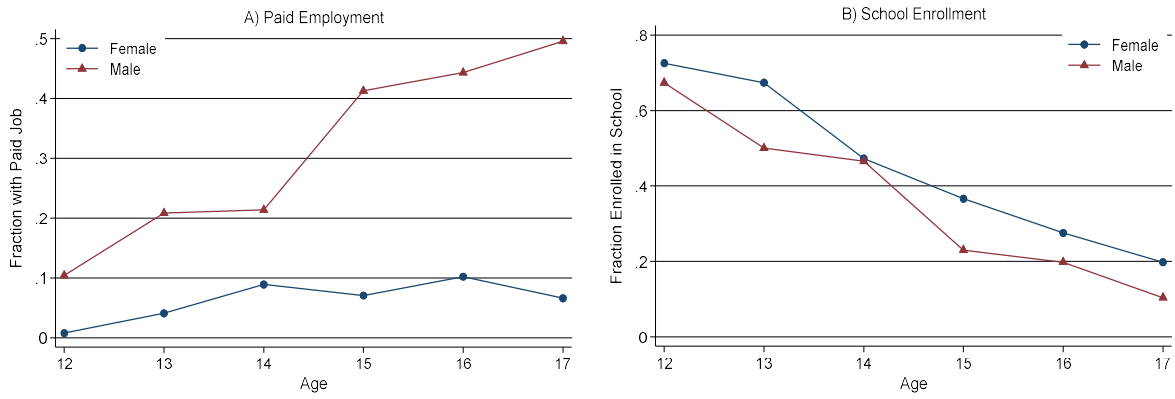
Table 1 Descriptive Statistics on Refugee Children

Variables	All Mean (1)	Employed Mean (2)	Variables continued	All Mean (1)	Employed Mean (2)
In paid employment	0.20	1.00	Mother Tongue		
Sex	0.47	0.15	Turkish	0.05	0.06
Age	14.31 (1.71)	15.12 (1.55)	Kurdish	0.06	0.08
Age at Arrival	10.46 (2.43)	11.47 (2.14)	Arabic	0.80	0.73
Age at Arrival > 8	0.78	0.93	Other	0.01	0.03
Years since Arrival	3.85 (1.65)	3.65 (1.63)	Don't know	0.08	0.10
Years since Arrival >= 1	0.95	0.96			
			Relationship to household head		
Household Wealth Decile			Son/daugher	0.85	0.78
Wealth Decile = 1	0.42	0.45	Grandchild	0.02	0.01
Wealth Decile = 2	0.37	0.39	Sibling	0.04	0.07
Wealth Decile = 3	0.10	0.10	Sibling's child	0.02	0.04
Wealth Decile = 4	0.08	0.06	Sibling-in-law	0.02	0.03
Wealth Decile >= 5	0.02	0.01	Not related	0.00	0.02
			Other	0.06	0.05
Household Composition Variables					
# Adult Males (18-59, log)	0.86 (0.38)	0.84 (0.40)	Place of Residence in Turkey		
# Adult Females (18-59, log)	0.87 (0.32)	0.86 (0.35)	Istanbul, Urban	0.16	0.32
# Children Aged 15-17 (log)	0.59 (0.43)	0.73 (0.36)	Aegean, Urban	0.03	0.04
# Children Aged 7-14 (log)	1.15 (0.51)	1.07 (0.55)	East Marmara, Urban	0.01	0.01
# Children Under 7 (log)	0.66 (0.55)	0.67 (0.55)	West Anatolia, Urban	0.03	0.03
# Elderly (60+, log)	0.11 (0.28)	0.09 (0.24)	Mediterranean, Urban	0.37	0.31
			Central Anatolia, Urban	0.01	0.01
Father Alive	0.91	0.89	Central East Anatolia, Urban	0.01	0.02
Don't know	0.01	0.00	Southeast Anatolia, Urban	0.32	0.26
Mother Alive	0.98	0.96	Mediterranean, Camp	0.02	0.00
			Southeast Anatolia, Camp	0.03	0.00
Educational Attainment of Household Head					
No education	0.14	0.19	Birth Province		
Incomplete primary	0.07	0.07	Deyrizor	0.04	0.04
Complete primary	0.32	0.33	Halep	0.62	0.68
Incomplete secondary	0.11	0.13	Hama	0.05	0.05
Complete secondary	0.18	0.14	Haseki	0.02	0.02
Above secondary	0.18	0.13	Humus	0.05	0.03
Don't know	0.01	0.00	Idlib	0.10	0.06
			Lazkiye	0.03	0.02
Female Household Head	0.12	0.15	Rakka	0.03	0.07
			Sam	0.03	0.02
Age of Household Head			Other	0.02	0.02
Age: 15-29	0.06	0.11			
Age: 30-39	0.22	0.17	Place of Birth Controls		
Age: 40-49	0.43	0.48	Province center	0.47	0.44
Age: 50-64	0.26	0.21	District center	0.17	0.14
Age: 65+	0.03	0.02	Sub-district/village	0.35	0.42
			Number of Observations	1,459	275

Notes: The data come from the Syrian migrant module of the 2018 Turkish Demographic and Health Survey. The sample is restricted to 12- to 17-year-old children. Wealth deciles are constructed using both the native and refugee population. Standard deviation for continous variables are given in parantheses. Survey weights are used.

Table 2 Determinants of Child Labor

Dependent Variable: Paid Employment

Variables	(1)	(2)	(3)	(4)
Interacted Age-Gender Dummies	yes	yes	yes	yes
Age at Arrival Dummies	yes			
Years since Arrival Dummies		yes		
Age at Arrival > 8			0.059**	0.059**
			[0.029]	[0.028]
Years since Arrival >= 1			0.116**	0.121***
			[0.048]	[0.045]
Household Wealth Decile				
Wealth Decile = 2	0.007	0.004	0.003	0.014
	[0.025]	[0.025]	[0.025]	[0.026]
Wealth Decile = 3	-0.018	-0.021	-0.019	-0.005
	[0.035]	[0.037]	[0.035]	[0.036]
Wealth Decile = 4	-0.073*	-0.077*	-0.074*	-0.046
	[0.043]	[0.043]	[0.043]	[0.044]
Wealth Decile >= 5	-0.092	-0.111*	-0.098	-0.050
	[0.068]	[0.066]	[0.066]	[0.063]
Household Composition Variables				
# Adult Males (18-59, log)	-0.039	-0.034	-0.037	-0.042
	[0.034]	[0.034]	[0.034]	[0.033]
# Adult Females (18-59, log)	-0.001	-0.004	-0.000	-0.015
	[0.047]	[0.047]	[0.047]	[0.045]
# Children Aged 15-17 (log)	0.016	0.019	0.014	0.002
	[0.030]	[0.030]	[0.030]	[0.029]
# Children Aged 7-14 (log)	0.037	0.042	0.037	0.021
	[0.029]	[0.030]	[0.029]	[0.028]
# Children Under 7 (log)	0.042*	0.040*	0.041*	0.034
	[0.023]	[0.023]	[0.023]	[0.022]
# Elderly (60+, log)	-0.026	-0.020	-0.020	-0.020
	[0.037]	[0.037]	[0.038]	[0.036]
Father Alive	0.076	0.075	0.081	0.082
	[0.056]	[0.055]	[0.055]	[0.052]
Mother Alive	-0.015	-0.030	-0.025	-0.033
	[0.068]	[0.072]	[0.069]	[0.070]
Educational Attainment of Household Head (Baseline: No education)				
Incomplete primary	-0.008	-0.005	-0.009	0.005
	[0.048]	[0.048]	[0.048]	[0.047]
Complete primary	-0.030	-0.021	-0.024	-0.023
	[0.037]	[0.037]	[0.037]	[0.036]
Incomplete secondary	-0.050	-0.041	-0.045	-0.037
	[0.048]	[0.048]	[0.048]	[0.047]
Complete secondary	-0.058	-0.047	-0.045	-0.036
	[0.039]	[0.039]	[0.039]	[0.039]
Above secondary	-0.103***	-0.099**	-0.096**	-0.073*
	[0.040]	[0.040]	[0.040]	[0.039]
Female Household Head	0.068	0.063	0.077	0.082*
	[0.050]	[0.049]	[0.049]	[0.045]

Variables continued	(1)	(2)	(3)	(4)
Age of Household Head (Baseline: 15-29)				
Age: 30-39	-0.111	-0.081	-0.091	-0.092
	[0.086]	[0.085]	[0.086]	[0.082]
Age: 40-49	-0.051	-0.025	-0.031	-0.036
	[0.089]	[0.088]	[0.088]	[0.084]
Age: 50-64	-0.106	-0.074	-0.085	-0.080
	[0.087]	[0.086]	[0.087]	[0.083]
Age: 65+	-0.123	-0.099	-0.113	-0.138
	[0.122]	[0.125]	[0.123]	[0.118]
Mother Tongue (Baseline: Turkish, spoken by Turkmen)				
Kurdish	-0.042	-0.031	-0.039	-0.065
	[0.075]	[0.075]	[0.075]	[0.074]
Arabic	-0.078	-0.074	-0.081	-0.100*
	[0.056]	[0.058]	[0.056]	[0.057]
Other	0.090	0.095	0.080	0.043
	[0.140]	[0.136]	[0.140]	[0.131]
Location of Residence in Turkey (Baseline: Istanbul, Urban)				
Aegean, Urban	-0.223***	-0.208***	-0.215***	-0.209***
	[0.077]	[0.074]	[0.076]	[0.075]
East Marmara, Urban	-0.030	-0.013	-0.016	-0.039
	[0.120]	[0.115]	[0.124]	[0.114]
West Anatolia, Urban	-0.204***	-0.212***	-0.207***	-0.225***
	[0.074]	[0.075]	[0.074]	[0.075]
Mediterranean, Urban	-0.205***	-0.204***	-0.205***	-0.227***
	[0.040]	[0.040]	[0.040]	[0.040]
Central Anatolia, Urban	-0.188**	-0.189**	-0.189**	-0.183**
	[0.079]	[0.084]	[0.079]	[0.082]
Central East Anatolia, Urban	-0.166	-0.167	-0.169	-0.159
	[0.104]	[0.117]	[0.112]	[0.122]
Southeast Anatolia, Urban	-0.210***	-0.211***	-0.215***	-0.230***
	[0.039]	[0.039]	[0.039]	[0.039]
Mediterranean, Camp	-0.261***	-0.276***	-0.257***	-0.252***
	[0.055]	[0.059]	[0.053]	[0.061]
Southeast Anatolia, Camp	-0.362***	-0.374***	-0.366***	-0.356***
	[0.046]	[0.047]	[0.045]	[0.048]
Place of Birth Controls (Baseline: Province Center)				
District center				0.006
				[0.028]
Sub-district/village				0.082***
				[0.026]
Birth Province Dummies				yes
Relationship to HH Dummies	yes	yes	yes	yes
Number of Observations	1,459	1,459	1,459	1,459
R-squared	0.297	0.293	0.291	0.314

Notes: The data come from the refugee sample of the 2018 Turkish Demographic and Health Survey. The sample is restricted to 12- to 17-year-old children. The estimates come from OLS regressions, where the standard errors are clustered at the household level and survey weights are used. Other variables included in the regression are dummy variables indicating missing information for a small number of observations on head's education, father alive, mother tongue and birth place information. Statistically significant, *** at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

Table 3 Determinants of Child Labor by Gender

	Dependent Variable: Paid Employment			

Left panel:

	Boys		Girls	
Variables	(1)	(2)	(3)	(4)
Age dummies	yes	yes	yes	yes
Age at Arrival > 8	0.129***	0.125***	-0.009	-0.005
	[0.047]	[0.048]	[0.032]	[0.030]
Years since Arrival >= 1	0.216***	0.190***	0.002	0.018
	[0.076]	[0.073]	[0.049]	[0.050]
Household Wealth Decile				
Wealth Decile = 2	-0.005	0.006	0.005	0.004
	[0.040]	[0.041]	[0.024]	[0.025]
Wealth Decile = 3	-0.017	-0.007	-0.028	-0.017
	[0.066]	[0.068]	[0.032]	[0.034]
Wealth Decile = 4	-0.113	-0.078	-0.027	-0.007
	[0.074]	[0.074]	[0.031]	[0.033]
Wealth Decile >= 5	-0.106	-0.029	-0.046	-0.014
	[0.108]	[0.104]	[0.042]	[0.043]
Household Composition Variables				
# Adult Males (18-59, log)	-0.009	-0.005	-0.088**	-0.095***
	[0.053]	[0.054]	[0.034]	[0.032]
# Adult Females (18-59, log)	-0.032	-0.051	0.045	0.021
	[0.074]	[0.073]	[0.050]	[0.047]
# Children Aged 15-17 (log)	0.016	0.008	0.017	0.007
	[0.049]	[0.048]	[0.031]	[0.030]
# Children Aged 7-14 (log)	0.034	0.022	0.026	0.006
	[0.044]	[0.045]	[0.033]	[0.032]
# Children Under 7 (log)	0.051	0.047	0.042*	0.031
	[0.036]	[0.037]	[0.023]	[0.021]
# Elderly (60+, log)	0.039	0.056	-0.061*	-0.070**
	[0.069]	[0.069]	[0.032]	[0.031]
Father Alive	0.155*	0.165**	-0.001	0.005
	[0.082]	[0.083]	[0.065]	[0.057]
Mother Alive	-0.064	-0.063	0.067**	0.032
	[0.114]	[0.118]	[0.030]	[0.035]
Educational Attainment of Household Head (Baseline: No education)				
Incomplete primary	-0.056	-0.042	0.045	0.070
	[0.078]	[0.077]	[0.055]	[0.055]
Complete primary	-0.040	-0.057	0.010	0.024
	[0.059]	[0.059]	[0.038]	[0.035]
Incomplete secondary	-0.139*	-0.140*	0.085	0.095**
	[0.072]	[0.072]	[0.053]	[0.046]
Complete secondary	-0.096	-0.105*	0.037	0.051
	[0.062]	[0.060]	[0.037]	[0.037]
Above secondary	-0.150**	-0.123**	-0.002	0.016
	[0.061]	[0.061]	[0.037]	[0.035]
Female Household Head	0.108	0.125*	0.053	0.049
	[0.074]	[0.074]	[0.048]	[0.041]

Right panel:

	Boys		Girls	
Variables continued	(1)	(2)	(3)	(4)
Age of Household Head (Baseline: 15-29)				
Age: 30-39	-0.059	-0.079	-0.142	-0.138
	[0.106]	[0.105]	[0.118]	[0.088]
Age: 40-49	0.034	0.015	-0.117	-0.124
	[0.111]	[0.110]	[0.118]	[0.090]
Age: 50-64	-0.039	-0.049	-0.143	-0.137
	[0.114]	[0.113]	[0.114]	[0.086]
Age: 65+	-0.107	-0.169	-0.177	-0.217**
	[0.168]	[0.170]	[0.128]	[0.108]
Mother Tongue (Baseline: Turkish, spoken by Turkmen)				
Kurdish	-0.167	-0.185	0.096	0.076
	[0.129]	[0.130]	[0.064]	[0.065]
Arabic	-0.191*	-0.181*	0.027	-0.013
	[0.102]	[0.103]	[0.038]	[0.037]
Other	-0.217	-0.241	0.448**	0.401**
	[0.213]	[0.209]	[0.182]	[0.174]
Location of Residence in Turkey (Baseline: Istanbul, Urban)				
Aegean, Urban	-0.213*	-0.227*	-0.250***	-0.225***
	[0.119]	[0.120]	[0.074]	[0.073]
East Marmara, Urban	0.140	0.079	-0.113*	-0.107*
	[0.315]	[0.312]	[0.065]	[0.057]
West Anatolia, Urban	-0.233**	-0.262**	-0.186***	-0.193***
	[0.117]	[0.119]	[0.051]	[0.052]
Mediterranean, Urban	-0.302***	-0.329***	-0.092**	-0.119***
	[0.058]	[0.060]	[0.047]	[0.044]
Central Anatolia, Urban	-0.188	-0.173	-0.128***	-0.144***
	[0.220]	[0.210]	[0.046]	[0.053]
Central East Anatolia, Urban	-0.177	-0.154	-0.141***	-0.144***
	[0.177]	[0.185]	[0.052]	[0.054]
Southeast Anatolia, Urban	-0.291***	-0.318***	-0.127***	-0.138***
	[0.059]	[0.060]	[0.042]	[0.042]
Mediterranean, Camp	-0.361***	-0.347***	-0.136**	-0.129**
	[0.093]	[0.102]	[0.053]	[0.061]
Southeast Anatolia, Camp	-0.498***	-0.473***	-0.185***	-0.201***
	[0.067]	[0.072]	[0.046]	[0.048]
Place of Birth Controls (Baseline: Province Center)				
District center		0.015		-0.019
		[0.049]		[0.019]
Sub-district/village		0.069		0.083***
		[0.043]		[0.024]
Birth Province Dummies		yes		yes
Relationship to HH Dummies	yes	yes	yes	yes
Number of Observations	776	776	683	683
R-squared	0.280	0.268	0.199	0.277

Notes: The data come from the refugee sample of the 2018 Turkish Demographic and Health Survey. The sample is restricted to 12- to 17-year-old children. The estimates come from OLS regressions, where the standard errors are clustered at the household level and survey weights are used. Other variables included in the regression are dummy variables indicating missing information for a small number of observations on head's education, father alive, mother tongue and birth place. Statistically significant, *** at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

Table 4 Determinants of Child Labor by Age Group

	Dependent Variable: Paid Employment			

	Age: 12-14		Age: 15-17	
Variables	(1)	(2)	(3)	(4)
Age dummies	yes	yes	yes	yes
Age at Arrival > 8	0.054*	0.048	0.204	0.164
	[0.031]	[0.030]	[0.160]	[0.164]
Years since Arrival >= 1	0.047	0.061	0.180**	0.179**
	[0.047]	[0.051]	[0.072]	[0.071]
Household Wealth Decile				
Wealth Decile = 2	-0.005	0.011	0.018	0.034
	[0.028]	[0.027]	[0.047]	[0.049]
Wealth Decile = 3	-0.001	0.018	-0.039	-0.020
	[0.045]	[0.046]	[0.062]	[0.065]
Wealth Decile = 4	-0.034	-0.000	-0.092	-0.057
	[0.039]	[0.041]	[0.074]	[0.077]
Wealth Decile >= 5	-0.081*	-0.043	-0.184	-0.096
	[0.048]	[0.049]	[0.170]	[0.169]
Household Composition Variables				
# Adult Males (18-59, log)	-0.008	-0.010	-0.064	-0.064
	[0.036]	[0.035]	[0.058]	[0.060]
# Adult Females (18-59, log)	-0.023	-0.056	0.038	0.036
	[0.059]	[0.053]	[0.075]	[0.073]
# Children Aged 15-17 (log)	0.025	0.015	-0.066	-0.076
	[0.030]	[0.029]	[0.082]	[0.084]
# Children Aged 7-14 (log)	0.073*	0.066*	-0.003	-0.026
	[0.037]	[0.036]	[0.041]	[0.042]
# Children Under 7 (log)	0.033	0.025	0.039	0.030
	[0.024]	[0.023]	[0.040]	[0.040]
# Elderly (60+, log)	-0.068*	-0.061	-0.005	0.004
	[0.040]	[0.037]	[0.074]	[0.076]
Father Alive	-0.025	-0.027	0.197**	0.209**
	[0.066]	[0.061]	[0.080]	[0.081]
Mother Alive	-0.110	-0.147	0.101	0.111
	[0.119]	[0.119]	[0.074]	[0.079]
Educational Attainment of Household Head (Baseline: No education)				
Incomplete primary	-0.086	-0.077	0.038	0.058
	[0.053]	[0.052]	[0.087]	[0.088]
Complete primary	-0.112**	-0.107**	0.061	0.053
	[0.045]	[0.043]	[0.060]	[0.061]
Incomplete secondary	-0.100*	-0.084	-0.008	-0.013
	[0.058]	[0.055]	[0.076]	[0.078]
Complete secondary	-0.121**	-0.119**	0.007	0.010
	[0.048]	[0.046]	[0.063]	[0.064]
Above secondary	-0.169***	-0.150***	-0.013	0.018
	[0.048]	[0.045]	[0.063]	[0.066]
Female Household Head	0.031	0.043	0.119	0.127*
	[0.055]	[0.047]	[0.076]	[0.076]

	Age: 12-14		Age: 15-17	
Variables continued	(1)	(2)	(3)	(4)
Age of Household Head (Baseline: 15-29)				
Age: 30-39	-0.268**	-0.284**	0.045	0.037
	[0.127]	[0.127]	[0.104]	[0.101]
Age: 40-49	-0.199	-0.217*	0.071	0.058
	[0.130]	[0.130]	[0.123]	[0.118]
Age: 50-64	-0.284**	-0.290**	0.042	0.028
	[0.131]	[0.132]	[0.126]	[0.120]
Age: 65+	-0.190	-0.199	-0.074	-0.154
	[0.177]	[0.175]	[0.169]	[0.166]
Mother Tongue (Baseline: Turkish, spoken by Turkmen)				
Kurdish	-0.008	-0.027	-0.050	-0.087
	[0.084]	[0.086]	[0.123]	[0.128]
Arabic	-0.069	-0.083	-0.070	-0.093
	[0.063]	[0.065]	[0.099]	[0.102]
Other	0.254	0.217	-0.242	-0.258
	[0.169]	[0.159]	[0.249]	[0.250]
Location of Residence in Turkey (Baseline: Istanbul, Urban)				
Aegean, Urban	-0.216**	-0.200**	-0.187	-0.196
	[0.091]	[0.090]	[0.142]	[0.146]
East Marmara, Urban	0.019	0.012	-0.029	-0.078
	[0.113]	[0.111]	[0.199]	[0.180]
West Anatolia, Urban	-0.126	-0.137	-0.268**	-0.285**
	[0.088]	[0.087]	[0.119]	[0.122]
Mediterranean, Urban	-0.159***	-0.167***	-0.270***	-0.295***
	[0.048]	[0.049]	[0.060]	[0.061]
Central Anatolia, Urban	-0.295***	-0.271***	-0.123	-0.146
	[0.069]	[0.062]	[0.130]	[0.139]
Central East Anatolia, Urban	-0.011	0.008	-0.432***	-0.421***
	[0.119]	[0.127]	[0.135]	[0.145]
Southeast Anatolia, Urban	-0.162***	-0.169***	-0.272***	-0.290***
	[0.046]	[0.047]	[0.064]	[0.066]
Mediterranean, Camp	-0.196***	-0.145**	-0.284**	-0.292**
	[0.057]	[0.063]	[0.113]	[0.128]
Southeast Anatolia, Camp	-0.247***	-0.203***	-0.514***	-0.528***
	[0.051]	[0.057]	[0.073]	[0.082]
Place of Birth Controls (Baseline: Province Center)				
District center		-0.022		0.042
		[0.033]		[0.052]
Sub-district/village		0.052*		0.106**
		[0.029]		[0.044]
Birth Province Dummies		yes		yes
Relationship to HH Dummies	yes	yes	yes	yes
Number of Observations			616	616
R-squared			0.322	0.343

Notes: The data come from the refugee sample of the 2018 Turkish Demographic and Health Survey. The sample is restricted to 12- to 17-year-old children. The estimates come from OLS regressions, where the standard errors are clustered at the household level and survey weights are used. Other variables included in the regression are dummy variables indicating missing information for a small number of observations on head's education, father alive, mother tongue and birth place. Statistically significant, *** at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

APPENDIX

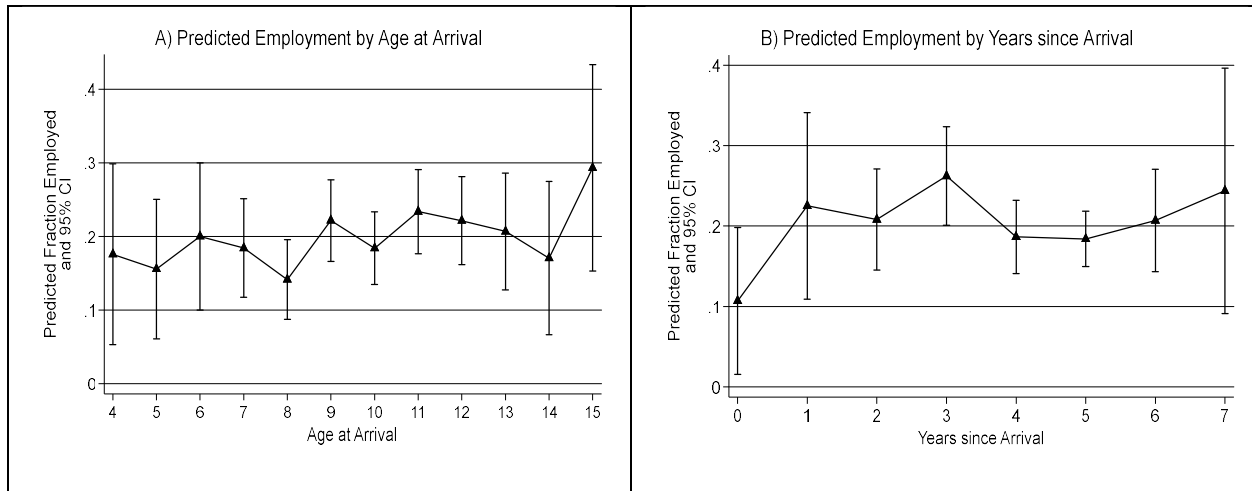Figure A1: Predicted Employment by Age at Arrival and Years since Arrival

Figure A2: Predicted Employment by Age and Gender