

**YOUTHS IN THE LABOR MARKET
AND TRANSITION FROM SCHOOL TO WORK IN TANZANIA**

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This paper documents the school and labor market outcomes of individuals aged 15-24 in Tanzania using micro data from the 2000/01 Integrated Labor Force Survey and analyzes their determinants. We find evidence of remarkably high (involuntary) unemployment and inactivity in urban areas among both young men and women compared to prime age individuals. Individuals drop out of school long before they find a job experiencing very long term unemployment, especially in Dar es Salaam. We show that local labor market conditions are important determinants of individuals' decision to work, although they do not affect significantly school choices. This coupled with the apparently high returns to school in the labor market, suggests some room for policies aimed at improving stay-on rates.

INTRODUCTION

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Say something about cohort and age

1. DATA AND DESCRIPTIVE EVIDENCE

1.1 Basic time use patterns

In this paper we use micro data from the 2000/2001 Integrated Labor Force Survey (ILFS) to document patterns of time use among teenagers and youths in Tanzania and shed some light on their transition from school to the labor market.

The ILFS is a rather large data set (43,558 individual observations in 11,158 households) collecting information on several features of individuals' work activity, schooling and (off the job) job-search together with information on an array of individual and household characteristics.

In this study we present some descriptive evidence on time use patterns of individuals aged 15-19 (in the following 'Teenagers') and 20-24 (in the following 'Youth') relative to individuals aged 35-49 (in the following 'Prime-age' individuals). We present separate results for men and women and for the main geographical areas of the country: Dar Es Salaam (in the following DES), Other urban areas, and Rural areas. In the rest we refer sometimes to DES plus Other urban areas as "urban areas". DES, other urban areas and rural areas account respectively for 15%, 17% and 69% of the observations in the sample and for 7% and 16% and 77% of the weighted sample. Teenagers and youths account for a slightly higher share of the population in urban areas, accounting for 8% of the weighted sample in DES, 17% in other urban areas and 75% in rural areas. For men we have 1,008, 996 and 3,971 observations respectively in DES, other urban areas and rural areas. For women these figures are 1,162, 1,221 and 3,982.

Tables 1A and 1B report basic labor supply indicators separately for boys and girls. In all tables, the data used are weighted by sampling weights. Column 1 reports information on the proportion of individuals in school. The data illustrate that school attendance is in the order of 58% for teenagers in DES and tends to fall as one moves to other urban areas and then to rural areas, where school attendance is in the order of 39%. A similar pattern can be identified for youths, with around 14% of them in school in DES, and only 2% in rural areas. Among individuals out of school, some have dropped out at an earlier age while others have never attended. Column 2 reports information on those who never attended school. School attendance at one point in an individual's life is almost universal in DES across all age groups, varying between 97% and 98%. A similar picture emerges in other urban areas where the proportion of males who never attended school is in the order of 4% irrespective of age. School attendance though is far from universal for boys in rural areas: 15% of both teenagers and youths have never attended school. This proportion rises to 19% for prime-age men, suggesting an improvement in education outcomes across subsequent cohorts of men in rural areas.

Patterns of work participation in column 3 are, to a large extent, and in all areas, the mirror image of patterns of school attendance. Work here refers to any work activity in the week prior to the survey, and includes those with a job but temporarily absent from it. While around 20% of male teenagers are in work in urban areas, the corresponding proportions in other urban areas and in rural areas are respectively 43% and 76%. Similar patterns can be identified for youths, with an employment-to-population ratio that increases from 47% in DES to 76% in other urban areas. In contrast, most youths living in rural areas are in work, with an employment-to-population ratio of 92%. Both teenager and youth participation is always below prime-age men's participation, the latter being in the order of 95% to 97% and displaying little variation across areas.

However, not all young individuals in school are out of work. Column 4 reports the proportion of young men combining work and school. One can clearly see that part-time work and school is essentially a phenomenon affecting teenagers in all areas. In other urban areas, there is a small proportion of individuals doing both activities (less than 4%), but this proportion rises to 22% in rural areas. This is probably due to the circumstance that rural teenagers are able to provide their work services on the household farm, without this requiring going through a job-search process, or formal contractual arrangements. In addition, the lower level of average household income in these areas potentially makes these individuals more likely to work, even while in school.

Column 5 analyses the proportion of individuals who are neither at work nor at school (sometimes defined as *jobless*, see Ryan XXX). One can check that the sum of those in work (column 1), plus those in school (column 3), plus those neither in school nor in work (column 5) minus those combining work with school (column 5) adds up to one. This column provides a first illustration of the problems that young individuals face in the labor market Tanzania. Around 25% of teenagers and 40% of youths are neither at school nor at work in DES. The corresponding proportions in other urban areas are 18% for both teenagers and youths. In rural areas, joblessness is lower in the order of 7% for both age groups.

Looking at women time use patterns (Table 1B), notable differences between men and women emerge. Women are less likely to be in school relative to men of the same age. This is particularly salient in urban areas: in DES the proportions of female teenagers and youths in school are respectively 44% and 5% (i.e. respectively 14 p.p. and 9 p.p. less than boys of the same age). In other urban areas, the proportions of female teenagers and youths in school are respectively 37% and 2% (respectively 12 p.p. and 5 p.p. less than boys of similar age). In rural areas, where boys' school attendance is lower, differences between girls and boys are less evident, with a proportion of female teenagers in school of 34% and a proportion of

female youths in school of 1% (i.e. respectively 5 p.p. and 1 p.p. less than boys of similar age).

Column 2 investigates whether these differences are due to girls being less likely to enroll in school in the first instance. The proportion of teenager and young girls who never attended school is around 4% in DES and between 5% and 6% in other urban areas, hence exhibiting little difference with respect to men. This suggests that girls are on average less likely to remain in school relative to boys. The proportion of teenager and young girls who never attended education is much higher in rural areas: respectively 19% and 21%, *i.e.* between 4 and 5 p.p. more than men. Although girls appear to do worse than boys in terms of educational attendance, a comparison with older individuals shows that recent cohorts of women have experienced a remarkable progress relative to men both in rural and in urban areas. The proportion of prime-age women who never attended school is 12% in urban areas (10 p.p. more than men), 16% in other urban areas (12 p.p. more than men) and 47% in rural areas (27 p.p. more than men)

Similarly to men, employment ratios increase with age in all areas, and they are at their lowest in DES and at their highest in rural areas. As illustrated in column 3, the proportion of female teenagers at work is 37% in DES, 45% in other urban areas, and 76% in rural areas. The corresponding proportions among female youths are 37%, 67% and 92%. In general, teenager girls are more likely to be in work than teenager boys: this differences range from 6 p.p. in DES to 1 p.p. in other urban areas. Differences are statistically significant.¹ No differences emerge in rural areas. The pattern is reversed among youths, as young girls are less likely to be in work than young boys, as differences range from minus 10 p.p. in DES to minus 9 p.p. in other urban areas. Again, no differences emerge between girls and boys in

¹ One can easily check that with around 1,000 observations (N), the standard deviation of a proportion (p) is at most 0.015 (this is the square root of $(p)(1-p)/N$ for $p=0.5$, *i.e.* at its maximum). This suggests that most of the differences between boys and girls in this and the remaining tables are statistically significant since they are outside each other gender group confidence interval.

rural areas. One potential explanation for this pattern is that girls in urban areas drop out of school earlier than boys, and enter the labor market earlier. However, as they age, some of them tend to withdraw from the labor market, as they get gradually absorbed by childrearing and other domestic activities. This is confirmed by an analysis of employment to population ratios among prime-age women that shows a negative female-male gap. The differences in the employment to population ratios between prime-age women and men are respectively minus 28 p.p. in DES and minus 5 p.p. in other urban areas. Differences in rural areas are only in the order of 1 p.p.

Column 4 (Table 1B) shows that girls are also less likely than boys to combine work and education. This is a largely a reflection of the fact that less women are in full-time education. If one standardizes the proportion of those combining work and school (in column 4) to the proportion in school (in column 1), results are very similar for men and women, so that, conditional on being in school, the probability of work is similar for boys and girls. Finally, column 5 reports the proportion of women neither at school nor at work. As one could have expected from the data presented in the previous columns, girls are more likely to be jobless than boys in urban areas. This is likely to partly reflect lower labor supply of women together with potentially lower labor demand for their work services. Similarly to men, it appears that young girls aged 20-24 (youths) are at greater risk of being neither in school nor in work. For example the proportion of jobless women rises from 32% for teenagers in DES to 58% for youths, and falls to 30% for prime-age women. The corresponding proportions in other urban areas are 28%, 30% and 10%. There are no discernible differences in the incidence of joblessness between boys and girls in rural areas.

In sum, there is evidence that a non-negligible proportion of the population starts to work at rather early ages, and drops out of school, especially in rural areas. In general girls drop out earlier and enter the labor market sooner than boys. However, as more and more

individuals drop out of school, they also tend to find it hard to get a job especially in urban areas. Whereas, eventually, most men get absorbed into the labor market, a large proportion of women remains out of the labor market, especially in DES, possibly devoting their workforce to home production. In rural areas, the data suggest a smoother transition with a large proportion of individuals transiting into work at early ages, with this proportion increasing with age. This is true for both men and women. It is important however to realize that this smoother transition in rural areas might be the result of individuals being required to work at early ages and to drop out of school in order to guarantee their household's and own survival, together with lower returns to education and job search. Rural jobs are likely to warrant just subsistence for many individuals. In this sense, such quicker transitions are possibly associated to worse lifetime outcomes for individuals in rural parts relative to those in urban parts.

1. 2. Work and wages

In this section, we concentrate on the characteristics of those in work. Tables 2A and 2B report the distribution of work by occupation, together with some information on hours of work and underemployment. The last part of the tables presents information on wages.

Columns 1 to 5 report the proportion of individuals by occupation split into five categories: those in paid employment (employees), self-employed - split between those with and without employees -, those performing unpaid work in the family non-agricultural business (typically, shops), and those working on their own farm or *shamba* (**DEFINE**). Work for pay includes both payment in cash and kind. These data refer to the individuals' main occupation in the week prior to the survey. Boys are in general more likely to perform work on the household farm or business compared to prime-age men and are less likely to be in paid employment or to run their own business, although differences tend to disappear with

age. For example, among teenagers the proportion of employees is 41%, 15% and 4% respectively in DES, other urban areas and rural areas. For male youths these proportions are respectively 47%, 22% and 6%. This compares to the following figures for prime-age men: 55%, 37% and 9%. Similarly, the proportions of those working in the family business (whether agricultural or not) in the three areas are 33%, 68% and 94% for teenagers and 13%, 53% and 90% for youths. The corresponding proportions for prime-age men are 5%, 29% and 86%. Self-employment (whether with or without employees) interests respectively 27%, 17% and 2% of teenagers and 40%, 26% and 5% of youths. The proportions for prime-age men are 40%, 34% and 5%. One possible interpretation of these figures is that, as they age, individuals move gradually from work in the household enterprise/farm into paid employment and self-employment. Paid employment might require a lengthy job search, and access to self-employment might require either capital or access to credit, both these conditions being probably harder to fulfill for younger individuals. In addition a compositional effect is likely to be at work. This is because, as the labor force ages, an increasing proportion of it is composed by individuals with higher education. These trends potentially reflect the circumstance that more educated individuals are more likely to enter into paid employment or to start their own business (especially with employees) than less educated individuals.²

Column 6 presents data on total hours of work in all jobs. In general workers in urban areas tend to work longer hours. Prime-age men work on average 58 hours a week in DES and 62 hours in other urban areas. In rural areas, average hours of work are lower, in the order of 54 hours. Both teens and youths tend to work less than prime-age men, but patterns across areas largely reflect those of prime-age men's. Average number of hours of work among

²Regression results (not reported) show that conditional on education the probability of being an employee does not grow with age. However for self employment with employees there is still a pronounced age growth, even if one conditions on education. This suggests that compositional effects are important in explaining the growth in dependent employment over the life cycle but not the growth in self employment with employees.

teenagers is in the order of 53, 44 and 43 respectively in DES, Other Urban areas and Rural areas respectively. For youths, these numbers are 58, 58 and 52 respectively.³

Data on hours of work include all jobs held by individuals. A non negligible proportion of individuals in Tanzania holds at least two jobs. Column 7 reports this proportion. Multiple job holding is particularly widespread in other urban areas and in rural areas, and is more common among prime-age men compared to teenagers and youths. For example only 2% of youth in employment have a secondary job in DES compared to around 8% of prime-age men. In rural areas, these figures are 18% and 24%. Overall it appears that young individuals work slightly shorter hours than prime-age men, and are less likely to hold more than one job.

One might wonder whether these differences in hours worked across different age groups reflect differences in the supply or the demand for labor. In what consists of an admittedly imperfect measure of the imbalance between the demand and the supply of hours of work across age groups, we report an indicator of underemployment in column 8. This measures the proportion of individuals who work less than 40 hours a week and declare a desire for working more hours.⁴ It is remarkable that this proportion is always the highest among young individuals. For instance in DES 7% of teenagers and 4% of youths declare being underemployed. For prime-age men this proportion is only 1%. In rural areas the corresponding proportions are respectively of 5%, 6% and 3%. Although effectively male youths and teenagers tend to work shorter hours than prime-age men, this appears – at least in part – to be result of lack of employment opportunities rather than a desire to work shorter hours.

³ Because some teenagers tend to combine work and school, one might think that a more appropriate comparison is between young and prime-age individuals out of school. Effectively, when one restricts to this sample, the data (not reported in the Table) show that teenagers tend to work less than older workers in both rural and other urban areas, but more than older workers in DES.

⁴ Unfortunately the questionnaire does not ask whether this refers to a desire of working longer hours at the same wage.

Finally, column 9 reports log hourly wages for employees only. These data are obtained as the (log of the) ratio of monthly income from employment divided by monthly usual hours of work. Monthly hours of work are obtained as weekly hours of work times 4.2. Wages are expressed in XXX. There are very pronounced differences in wages across age groups. For example in DES, differences between youths and teenagers are in the order of 65 log points and differences between prime-age men and male teenagers are in the order of 155 log points, more than a doubling of the wage. Differentials in other urban areas are respectively 48 and 153 log points and in rural areas they are 31 and 148 log points. These differences reflect only in part differences in labor market experience of these individuals. Working teenagers have lower education than working prime-age men (6.4 years of education compared to 8.2). This is because the former are disproportionately comprised of early school leavers.⁵ For this reason we have computed wage differentials conditional on education. Results (not reported) show that conditional log wage differentials between youths and teenagers and prime-age men and teenagers are respectively 19 and 85 log points in DES, 7 and 67 log points in other urban areas, and 10 and 63 log points in rural areas, *i.e.* as expected much lower than unconditional differentials. Overall, these differentials imply an average return to one extra year of experience between the ages of 20-24 and 35-45 ranging from 4.9 log points in urban areas to 3.6 in rural areas.

Table 2B reports the employment characteristics of women. Teenager girls appear to be more likely to work as employees than teenager boys in urban areas (52% and 17% in DES and other urban areas respectively, versus 41% and 15% for boys) and less likely to work in the family enterprise. Changes in the distribution of women's employment over the life cycle appear rather different the ones of men's. Similar to men, the proportion in non-agricultural self-employment rises with age in each area (from 27% to 59% in DES, from 13% to 36% in

⁵ This is despite the secular trend in the educational attainment of the population that implies that at any given age individuals from earlier cohorts are less educated than those from later cohorts.

other urban areas and from 2% to 3% in rural areas) and the proportion engaged in unpaid non agricultural family work falls (from 15% to less than 1% in DES, from 21% to 3% in other urban areas and from 5% to 1% in rural areas). However, in contrast with men, the proportion in salaried employment falls (from 52% to 37% in DES, from 17% to 14% in other urban areas) or stays constant (at 2% in rural areas), while engagement in the household farm or *shamba* rises. In urban areas, prime-age working women are less likely to be in paid employment or to be self-employed with employees than men, and more likely to be self-employed with no employees or to work in the family enterprise than prime-age men. In rural areas most working women tend to engage in work on the household farm. These women account for 94% of working women in rural areas (compared to 85% of working men). These patterns might reflect differential opportunities in the access to salaried employment for women compared to men, possibly due to their lower labor market characteristics (e.g. education), or as a result of gender discrimination. The need to take care of their children and families might also make salaried dependent employment a less attractive opportunity for women in Tanzania.

Information on hours shows that on average women tend to work shorter hours than men. Differences in average hours of work between prime-age women vary between minus 8 in urban areas to minus 5 in rural areas. The same does not apply if one looks at teenager girls: the average differences in hours of work among teenager girls and boys range from a positive value of 3 in DES to a negative value of 1 elsewhere. This is consistent with the notion that women tend to engage increasingly in household chores, although an alternative explanation may be that women who start to work at very early ages are those with the higher marginal utility of consumption relative to leisure, i.e. those from poorer backgrounds or whose leisure parents value less, hence those who provide more hours in the market. Underemployment is larger for females than for males. For example, 14% of female youth in

DES declare being underemployed compared to only 4% of men. One might suspect that this in part reflects different average hours of work between men and women. Recall that underemployment is ascertained by asking people who work less than 40 hours if they would be willing to work longer hours.

Data on wages show similar patterns for women and for men. Unconditional log wage differentials between female youths and teenagers are in the order of 90 log points in DES, 60 log points in other urban areas and 86 log points in rural areas. Differentials between prime-age women and young women are respectively: 222 log points, 213 log points and 153 log points. Differentials are generally much larger than for men. This is also observed when we condition on education. What this suggests is that perhaps women with higher earnings potential select into work in their adulthood.

Unfortunately, there is no way to ascertain with the available data how those working in the household farm – hence the majority of working teenagers and youths in rural areas - perform in terms of earnings.

In sum, the career and earnings profiles of men and women appear rather different. As they become older, urban men tend increasingly to move away from work in the household enterprise or farm towards salaried employment and self-employment. At the same time these individuals tend to work longer hours. This is a combination of true job changes, together with the fact that those who leave school later tend to be more likely to engage in salaried and self-employment, and to work longer hours. A large majority of working men in rural areas are engaged in work in the household farm, although qualitatively similar movements towards salaried employment and self-employment as those in urban areas are observed here.

As they grow older, women in urban areas increasingly work either as self-employed with no employees, or in the family farm or *shamba*. In part, this might reflect a movement away from salaried employment due to the need for more flexible working arrangements in

order to attend to domestic duties. In rural areas, women's participation is higher at any age and there is little indication that rural women withdraw from the labor market. The near totality of these women works on the household farm. Women tend to work shorter hours than men. However they are also more likely to declare being underemployed. In this sense, lower labor market attachment on the part of women seems to be not completely ascribable to their lower labor supply. There is evidence that, probably because of a combination of lower market skills and discrimination, women in Tanzania find it particularly hard to access the labor market in urban areas.

1.3. Inactivity and unemployment

So far we have concentrated on the characteristics of those in work. Tables 3A and 3B reports instead information on the characteristics of those out of work and/or school. We have already documented the levels of joblessness (*i.e.* those out of both work and school) in Tables 1A and 1B. The first column of table 3A reports the proportion of ILO active men. This includes those in work plus the strictly unemployed. The latter group includes those individuals who are out of work but are willing to take a job if offered one and who have taken some steps in the last week to look for work. Not surprisingly, activity rates increase with age and are the lowest in DES and the highest in rural areas among teenagers and youths, paralleling patterns of employment. Activity rates among teenagers increase from 39% in DES to 77% in rural areas. Participation rates for youths vary between 79% in DES and 93% in rural areas. For prime-age men, participation is almost universal, with a proportion of inactive individuals varying between 1% in DES to 3% in rural and other urban areas. Unemployment rates – the measure generally used to ascertain joblessness in more developed countries – are reported in column 2. These are obtained as the ratio between the number of (strictly) unemployed individuals and the number of ILO active individuals. Unemployment rates are remarkably

high among teenagers and youth in urban areas. There is virtually no unemployment in rural areas. For teenagers these rates range from 47% in DES to 13% in other urban areas. Similar patterns emerge among youths: unemployment rates are in the order of 40% in DES and 11% in other urban areas. These rates are remarkably higher than those in Southern Europe **(CHECK)** thought to be the region of the industrialized world to most suffer from youth unemployment. Interestingly, unemployment rates are virtually zero among prime-age men. Male unemployment in Tanzania is hence primarily an urban phenomenon almost exclusively affecting the young. One might wonder if these data provide a good indication of the extent of joblessness among different age groups. To the extent that relatively fewer youths are active (recall that active individuals do not include those in school), one might suspect that this mechanically inflates the incidence of unemployment among this group. In particular, if those out of school are selected in such a way that they are also those with a lower probability of finding a job, then these figures overestimate the extent of unemployment for a random individual in that age group. An alternative measure of joblessness relates the number of unemployed to the entire population, abstracting from whether these individuals are in school or not (or even active or not). The unemployment to population ratio is reported in column 3. Interestingly, even if one standardized unemployment to a much larger population at risk (i.e. the entire population in that age group), unemployment incidence is still higher among youths and teenagers. In particular, youths display unemployment to population ratios in the order of 32% in DES and 9% in other urban areas. Figures for prime-age individuals are virtually identical to the ones in column 2 given that, as shown in column 1, essentially all prime-age men participate in the labor market. Although we have so far concentrated on unemployment, it is important to realize that not all of those out of work (or school) are strictly unemployed. Columns 4 and 5 report respectively the proportion of individuals who are available to take a job if offered one and have not looked for work in the week preceding the survey, and those

who self-declare unavailable. These are groups with increasingly lower labor market attachment. The last group includes truly 'idle' individuals. First, notice that the proportion of available individuals who declare not having searched over the previous week is rather small at all ages and in all areas. This labor market status is most prevalent among teenagers and in the order of 3% of the population in all areas. Figures on inactivity among prime-age show, rather worryingly, that 5% of teenagers and 7% of youths in DES are idle. The proportions in other urban areas are 8% and 7% respectively. In rural areas 4% of teenagers and 3% of youths are inactive. These figures make the extent of joblessness even more worrying among teenagers and perhaps suggest that unemployment ratios might understate the extent of the problem. In either case (and with the exception of teenagers in other urban areas) unemployment account for the largest proportion of jobless individuals suggesting that it is lack of labor market opportunities rather than high reservation wages to largely account for young individuals' joblessness rates. This finding matches with the observation that underemployment is relatively a bigger problem for teenager and youths, suggesting again an involuntary exclusion from the labor market.

The question naturally rises as to why so many young individuals are inactive or not looking for a job. In table 4A we report the subjective reasons provided by these individuals for not looking or for not being available *tout court*. A large proportion of individuals answers that they are not looking for a job due to the poor expectation of finding one. This proportion is particularly high for teenagers and youths in urban areas. For example in DES, 66% of individuals report this as the main reason for not looking. This compares to 21% among youths and 0% among prime-age men. Another relevant share of those not looking reports to be waiting for a reply to a job application or waiting for a job to start. No systematic patterns can be detected through areas or age groups. Only in urban areas there is large proportion of

inactive youths and teenagers (around 30%) declaring not to be looking due to their involvement in home duties.

Columns 7-9 report the reasons provided by those not available. Between 20 and 30% of these inactive teenagers report being involved in household chores. The relative importance of this explanation falls as individuals age. Rather interestingly, between 11% and 46% of teenagers –depending on the area- report being inactive due to sickness or disability. This accounts for an even greater proportion of inactive youths. These worrisome figures are most likely the result of the HIV-AIDS epidemic. Although there is no way to ascertain this with the data at hand, evidence from other sources suggests that youths are the category of higher risk of HIV-AIDS in Tanzania, one of the countries with the highest incidence in Sub-Saharan Africa, **(QUOTE and CHECK)**. The residual category 'other' accounts for a large share of the inactive. Overall it appears that inactivity hides some productive employment in the household, hence leading to an overestimate of the true extent of joblessness among young individuals. One does not know though whether the category 'other' includes individuals who have stopped being available due to poor labor market prospects.

When one turns to women, several interesting patterns emerge. As column 1 of Table 3B shows, activity rates are higher among teenager women than teenager men in DES: here the activity rate for women is 47% (8 p.p. higher than for men). In rural areas there is no substantial difference between teenager boys and girls, with a teenager female activity rate in the order of 77% (the same as men's). In other urban areas girls are slightly less likely to be active than men (47% compared to an activity rate for teenager men of 50%). Although, similarly to men, women activity rates increase with age, the rise is less pronounced than for men, and hence men take over women in terms of activity rates by the time they reach prime-age. Participation rates for prime-age women are in the order of 95% in rural areas (2 p.p. less than men) and 78% in DES (20 p.p. less than men). Although activity rates are lower for

women than for men, a higher or equal proportion of active women is in unemployment at least in DES, as shown in column 2. In DES unemployment rates are 43% for female teenagers (3 p.p. less than men), 45% for female youths (5 p.p. more than men) and 11% among prime-age women (10 p.p. more than men). In other urban areas women are less likely to be unemployed than men when in their teens (6 % versus 13% for men), but are equally likely to be unemployed when they are in between the ages of 20 and 24 (10% versus 11% for men). Similar to men, there is no unemployment in rural areas. Urban unemployment hence is a similar problem for young males and females. In addition, prime-age women are also at high risk of unemployment, at least in DES. An analysis of columns 4 and 5 shows that a much higher proportion of women than men is available but not looking or unavailable. For example, in DES the proportion of female youths available but not searching is 9% (compared to 2% among men) and the proportion of idle youths is 18% (compared to 7% for men). Idleness rates rise from teenagerhood to youth, and then stay constant (at around 17%) in urban areas. In contrast, this rate increases and then decreases in other urban areas. Most likely, women here re-enter the labor market as they reach their 40s and are relieved from major childrearing responsibilities. Idleness is low and stable in rural areas.

Table 4B illustrates that more than half of female teenagers and youths in DES not looking for a job declare being discouraged, i.e. do not expect to find one. A smaller proportion of women than men declare being waiting for a response from a potential employer or for a job to start. As expected, women are more likely than men to report not looking due to family reasons. Eventually, more women than men report not looking due to being off-season in rural areas. This perhaps reflects the more cyclical nature of jobs for women than for men in the agricultural sector. Not surprisingly a higher proportion of idle women reports being involved in household duties as the main reason for not being available.

This proportion tends to increase with age in urban areas, consistently with the notion that inactive women effectively are engaged in productive work in the home.

Tables 5A and 5B analyze the characteristics of those available to take a job. Columns 1 to 3 report information on search methods (for those looking only). Formal job search via enquires with potential employers is the most widespread search method. However, as individuals age, they are less likely to use informal search channels (asking friends or relatives) than to ask directly employers or to attempt to start their own business. For example, the proportion of unemployed teenagers asking family and friends is 19% in DES, 29% in other urban areas and 36% in rural areas. Conversely, the proportions of those attempting to start their own business are respectively 6%, 3% and 28%. Among prime-age man instead only 9% use family and friends and their favorite job search channel in DES, 0% in other urban areas and 6% in rural areas. The proportion of prime-age men attempting to start their own business is 37% in DES 11% is other urban areas and 30% in rural areas. Overall these data show the difficulties that youths face in finding a job. They hardly attempt to start their own business, which, as already mentioned, requires access to capital, and hence is a less viable opportunity for youths. Young individuals are more likely to use informal channels, perhaps due to their lower chances of finding jobs through formal job applications with employers.

The figures in tables 4 show that urban teenagers and youths are at very high risk of being unemployed. However, these data are unable to tell us if these individuals circle in and out of unemployment, or whether they get stuck into non employment for long periods of time. Similarly, these data do not tell us anything on the distribution of unemployment. If unemployment is mainly a long-term phenomenon, this implies that this is largely concentrated among certain groups in the population, hence raising serious distributional

considerations.⁶ Columns 5 and 6 report the proportion of long-term unemployed among those available to take a job (whether searching or not). Column 5 reports the proportion of those with at least one year of job search. Column 6 shows the proportion of those with at least two years of job search. These are sometimes labeled very long-term unemployed. In urban areas, where unemployment is more likely to occur, long-term unemployed accounts for about 50% or more of the overall unemployment pool. What is remarkable is that long-term unemployment is particularly widespread among the youths. This is a major difference with respect to European countries in the 1990s, where long-term unemployment is thought of having been largely a problem for prime-age individuals (REFERENCE). More than 70% of unemployed youths in urban areas are long-term unemployed. This contrasts with a proportion of long-term unemployed in the order of 37-50% for prime-age men. In rural areas, where unemployment is almost non-existent, the data show that the few who declare being unemployed transit quite rapidly through this state. The proportion of long-term unemployment varies between 16% and 24% depending on age among rural men. Column 7 reports the average duration of unemployment as estimated from data on inflows and unemployment incidence.⁷

Average unemployment duration is remarkably high in urban areas and this is especially true for youths, consistent with the observation that these individuals have a disproportionate risk of being long-term unemployed. Average duration in DES varies between 3.6 years for teenagers and 9.1 years for youths. In other urban areas these figures are respectively 5 and 5.7. Notice that unemployment duration is also higher in DES for prime-

⁶ Note the reverse is not true, i.e. shorter durations tell us nothing on the distribution of unemployment.

⁷ Notice that cross-sectional data – including these ones – typically report information on unemployment duration for the unemployed only. Hence the duration of unemployment spells is left-censored. The simple average of these durations will tend to underestimate – and potentially by a large amount – actual unemployment duration. To derive duration here we use the following identity that holds in steady state $u=i/(i+h)$, where u is the unemployment rate, i is the inflow rate and h is the outflow rate (Machin and Manning, 1999). In steady state average duration equals the reciprocal of the outflow rate (i.e. $1/h$). To obtain the figures in column 5 we have computed unemployment rates as the proportion of individuals available (i.e. strict and non-strict unemployed) over the population in work or school or available. We compute inflow rates as the number of individuals with at most 3 months of unemployment standardized to the sum of those in work and school.

age men (3.4 years compared to 2 years in other urban areas) but still much lower than for teenagers and youths.

Data on job search and unemployment duration for women are reported in table 5B. No substantial differences emerge in the pattern of job search between men and women. When one moves to analyzing long-term unemployment and unemployment duration, it turns out that young women display generally shorter durations than young men. Thus is true for all age groups in all areas except teenagers in DES. Average duration among female youths in DES is 5.9 years (compared to 9.1 years for men) and in other urban areas this is 5.4 (compared to 5.2 for men). Obviously because a non-negligible proportion of women enter into inactivity, an option largely unavailable to men, this might explain why observed durations are shorter for women than for men.

In sum, we have illustrated that urban unemployment is primarily a youth phenomenon in Tanzania (and to a lower extent a problem for prime-age women in DES). Unemployment figures are likely to underestimate the extent of joblessness since a (small) proportion of individuals declare being available but not looking due to the expectation of not finding a job. (ILO) inactivity rates are also remarkably high, including for male youths, the group that should show stronger labor market attachment. Part of these individuals are engaged in household chores, hence they are hidden employed. It is also plausible though - but there is no way to ascertain this with this data – that some of these individuals are discouraged and have abandoned their search activity. We also find that a non negligible proportion of individuals declares being inactive due to health reasons. This accounts for as much as 4% of men and 2% of women aged 20-25 in DES. Although there is no way to check this in the data, it is plausible that this remarkably high inactivity rates are to be ascribed to the widespread incidence of HIV-AIDS.

Women seem to fare even worse than men. Although dropping out of the labor force seems an option for a non negligible proportion of women in urban areas, possibly itself the result of lower labor demand, joblessness remains higher for women even conditional on participation.

One further piece of evidence that emerges from the analysis is that long term unemployment is particularly widespread, especially among the youths. Rather than cycling in and out of the labor market in an attempt to gain employment for life, youths in urban Tanzania remain out of the labor force for very long periods of time. Part of the youth unemployment problem in Tanzania derives from the circumstance that on average youths are less likely to leave unemployment than prime-age individuals (in technical terms, they have longer durations, or which is the same, lower average outflow rates). Girls tend to display lower average unemployment durations than boys but this is most likely a reflection of the fact that some of them transit to inactivity, an option rarely pursued by men.

Although there is no incontrovertible way to ascertain this based on the descriptive statistics presented above, the fact that with few exception the majority of jobless individuals tends to self declare unemployed in urban areas together with the evidence presented in the previous section of widespread underemployment, suggests that lack of labor demand rather than the unwillingness to take jobs due to high reservation wages explains to a large extent the difficulties that youths face into the labor market in Tanzania. This is true for both young men and women. Prime age women also appear to suffer from remarkably high rates of unemployment and underemployment. Participation is also lower for women than for men in urban areas. Although this might signal that their productivity at home is higher than the wage they are offered in the market (or that they have stronger preferences for home production relative to market activities), one additional (and not mutually exclusive) explanation is that low participation is itself the result of low labor market prospects. In rural areas

unemployment and underemployment are not major problems at all ages and across both sexes. Both participation and employment are remarkably high here. Obviously this says very little on the quality of jobs these individuals hold and their own overall level of living.

2. REGRESSION ANALYSIS

In the previous section we have illustrated that joblessness rates are remarkably high in urban Tanzania. A large majority of youth declare themselves unemployed or willing to take a job if offered one but not actively searching. Those in employment report some desire for working longer hours. These facts seem to point to the circumstance that the joblessness problem in this age group (and possibly among prime age women) is largely involuntary, i.e. due to a negative gap between the demand of labor and its supply.

In this section we investigate further teenagers' and youths' time use choices in Tanzania using simple regression tools. This allows ascertaining the conditional correlation between a number of variables of interest and boys' and girls' labor market outcomes.

2.1 RETURNS TO EDUCATION

In principle youth and teenagers have different ways of coping with labor market shocks. One first strategy consists in staying on in school. If the alternative to school is inactivity or unemployment, one might wonder why so many youths in Tanzania appear to drop out. Possibly one explanation has to do with the returns to education. If returns to education are low (relative to the costs), then this might explain high drop out rates even in the absence of labor market opportunities. To investigate this, in Tables 6A and 6B we report OLS regressions of a number of labor market outcomes on four education dummies: never attended school (0 years of education), incomplete basic (1-6 years of completed education), completed basic (7 years of completed education), at least one year of secondary education (8 years of

education or more). Columns 1-4 report regression results where we include a quadratic in age, regional dummies plus quarter of year dummies. Columns 5 to 8 report the same regressions with controls for potential experience (age minus highest grade attended) replacing controls for age. All regressions refer to urban areas only and are restricted to individuals out of school. Regressions are all weighted by sampling weights

Column 1 shows some labor market disadvantage for highly educated individuals. Relative to those with no education (the excluded category) of the same age, urban men with more than completed primary suffer from a job penalty of about 17 p.p. These regressions however ignore that more educated individuals have mechanically less accumulated potential labor market experience, including the time needed for job search. Once one conditions for experience in column 5, results are reverted, with employment gains among the more educated. For example those in the highest education group are on average 26 p.p. more likely to be in employment than those with no education. Similar results emerge if one looks at other outcomes variables. Unemployment shows some positive association with education when controls for experience are included (column 6) but differences across education groups are not statistically significant. It is inactivity to show the most pronounced fall with education. As column 7 illustrates, individuals at the top of the educational ladder are about 41 p.p. more likely to be active than those with no education once one controls for their potential permanence in the labor market. Finally column 8 shows that there are also monetary returns to education, with those at the top education group earning more than double than those at the very bottom (140 log points more). One has to be cautious about the interpretation of the coefficients in table 6A as the causal effects of education, i.e. the effect of making one individual at random in the population move from one education level to the other. This is because most likely those with higher education are a rather selected sample of individuals in Tanzania, as in most of other developing countries. If the labor market prospects of these

individuals are potentially better than those with less accumulated education for reasons other than education itself, then the OLS estimates will be upward biased (Card, 1999). However, what evidence there exists for developed countries suggests the marginal returns to education are potentially higher for those with higher marginal costs and lower educational achievement. In sum although the results are to be taken with some care, regression in Table 6a show considerable returns to education among urban men. A similar picture emerges for women. The only significant difference between men and women is that the latter display negative monetary returns to education. However, the very small and potentially highly selected sample of women with reported earnings in urban areas (92 observations, i.e. less than 5% of the sample) should make us wary of these results.

2.2 DETERMINANTS OF TIME USE

Having ascertained that there are considerable returns to education in Tanzania, we now move on to investigating the determinants of young individual's time use. First we investigate whether and to what extent young individuals' labor market outcomes are influenced by the state of the local labor market (aggregate demand and aggregate supply) and, conditional on this, we try to identify the groups at greater risk of dropping out of school, unemployment and inactivity. Alongside we investigate whether school distance, as a proxy for the (fixed) cost of attending school, might explain why attendance rates are low even in the face of apparently high returns to schooling.

Tables 7A and 7B present regressions of young individuals' time use separately in urban and rural areas respectively for males and females. In each column we regress the variable of interest on a set of regressors. First, we include measures of aggregate local labor demand and supply. One might expect that a major factor explaining the poor labor market fortunes of teenagers and youths in Tanzania is given by poor labor demand. If wages are far

from being perfectly flexible, low labor demand will increase joblessness. Youths might be at particular risk of being excluded from the labor market because of their lower labor market experience (and, to some extent, education), or because hiring and firing rules make it hard for employers to replace older workers with younger ones. Second, one might expect that, conditional on local labor demand, a rise in the supply of young workers tends to decrease their employment.

In order to explore the effect of local labor demand we prime-age employment to population ratio in the individuals' region of residence. We use prime-age male employment to population ratio for boys and the prime-age female employment to population ratio for girls. The advantage of using this measure as opposed to an aggregate employment measure is that the latter measure would also include young individuals' employment rate, inducing some division bias in the estimates when the dependent variable is youth's and teenager's time use. In addition, one will expect in general prime-age individuals to be less affected by increases in the supply of youths and teenagers - due to substitution or complementarity effects in the production technology - that would tend to induce some reverse causality in the regressions of interest. In this case, an exogenous increase in the supply of young individuals would to deterioration (improvement) in the employment prospects of other individuals and the OLS estimates would tend to underestimate (overestimate) the impact of local labor demand.

Because some prime-age individuals will be household members of the youths whose behavior we want to study, for each young individual we compute prime-age employment to population rate net of the employment of prime-age individuals in his household. This avoids the potential bias in the estimated OLS coefficients that stems from the correlation between different household member's labor supply due to reasons other than local labor demand or supply (e.g. patterns of substitution or complementarity in individuals' time use within the household or 'added worker effects'). As a measure of aggregate labor supply we use the share

of teenagers and youths over total working age population (15-60) in each region. Because, as predicted by a Harris-Todaro model (XXX), migration to cities is very high in Tanzania, accounting for about 28% of the population of teenagers and youths in urban areas, in order to compute the share of youths and teenagers in the population in urban areas we only restrict to those who declare being born in that area. This allows us controlling for the potential bias that would stem in our regressions due to endogenous migration. If migration is stronger towards cities where labor demand is also stronger (for example see Card 2000 for this), one would find no (or a weaker than 'true') correlation between youth labor supply and their employment rate.

As an additional measure of local opportunities we include average distance to secondary school. This information comes from the HBS 2000/01, that for each household provides information on distance to a large number of infrastructures. We have aggregated the HBS data by region and rural/urban status and we have included this variable on the right hand side of the regressions. This variables in measured in terms of time distance to the closest school and is expressed in number of hours.

As individual controls, we include unrestricted age dummies (coefficients not reported). These allow to control for the fact that participation rises with age and school attendance falls. This might induce some bias in our OLS estimates if and to the extent that areas with different labor demand or labor supply levels also happen to have a different structure of the population. Second, we include a variable denoting whether the individual received any type of training in his life. This includes both on-the-job and off-the-job training. The former includes apprenticeship while the latter also encompasses formal vocational education. One has to be cautious in interpreting the coefficient on this variable as the causal effect of training. If otherwise more able individuals or those with higher labor market prospects tend to have better (worse) latent labor market outcomes, this would lead to

overestimate (underestimate) the impact of training on labor market outcomes. Because we want to investigate the role for individuals' background in determining their labor market outcomes, we also include the average years of education of all other household members. Because each individual household member's education is correlated with his/her age and sex, we also completely condition for the age and sex structure of the individual's household by including the number of males and females in each five-year age cell in the household (coefficients not reported). Again, some care is needed here because individuals' living arrangements (i.e. the age and sex structure of those the boy lives with) might be endogenous to both the state of the local labor market (e.g. an individual remains with his origin family if labor demand is low and there are no employment opportunities open to him) or to unobserved determinants of labor market success. Fourth, we include a variable for whether the individual is a migrant. This variable might also be endogenous for the reasons listed above. All the regressions control for quarter-of-year dummies (again coefficients not reported) and we include a dummy for DES. This implies that we do not exploit differences between DES and other urban areas to identify the effect of aggregate indicators. These coefficients are completely identified based on differences across other urban areas. Observations from DES though contribute to the identification of the effect of all other individual variables in the model. The reason for not treating DES as any other urban area is that the youth labor market in DES is likely to be different from other urban labor markets in the country for reasons other than the different level of prime age employment, the demographic structure of its working age (native) population and average school distance.

Table 7A reports information on men. We report the probability of being in work (whether or not in combination with school) in column 1, the probability of school (whether in combination with work or not) in column 2, the probability of combining work and school in column 3, the probability of unemployment (independent of whether the individual is

searching or not but provided the individual declares available) in column 4 and the probability of idleness (no school, no work and no job search) in column 5. Table 7A presents results for urban boys at the top and for rural boys at the bottom.

Local labor demand affects strongly the probability of work of youths and teenagers. The estimated coefficient on prime age employment (0.490) implies that one extra employed adult out of hundred in the population is associated to the employment of an additional half a boy each hundred. As predicted by theory, an increase in relative supply at fixed labor demand has a negative effect on employment. The estimated coefficient (-0.400) implies that out of two extra boys in the market, only one finds a job. We find no evidence of local labor market conditions affecting significantly school choices, although the coefficient on demand (-0.337) is negative. A rise in demand is associated to a rise in part time schooling (coefficient 0.082 but not significant) while a rise in supply has the opposite sign (coefficient -0.240, and significant). What columns 1 to 3 suggest is that local labor market conditions affect the margin between part time work and school, with an improvement in local labor market conditions leading to a fall in full time schooling and an increase in full time work, but no effect on individuals dropping out *tout court* from school. Results on inactivity show that the higher gap between demand and supply, the lower unemployment and idleness among although results cannot be told statistically apart from zero.

An analysis of the effect of school distance shows surprisingly no effect on school attendance. The only apparent margin of adjustment is between inactivity and unemployment with a rise travel time to school being associated to a fall in unemployment and a rise in inactivity. Possibly, higher school distance is a good proxy for the level of education acquired. So that the further away schools are, the lower is an individual's potential market wage and hence the greater the probability that he will declare inactive as opposed to unemployed.

An analysis of the other rows shows that migrant boys seem to be more likely to be inactive and less likely to be in school than natives. Higher household education decreases boys' probability of work. One additional year of education among all other household members is associated to a fall in employment of about 2 percentage points. Higher household education also tends to increase the probability of school and to decrease unemployment and inactivity. This is a strong suggestion that family background is an important predictor of labor market outcomes in Tanzania. Training is associated to higher employment and lower schooling. Although one might infer from this that training boosts employment, this might also indicate that training is administered with higher probability to those in work or at least to those with higher probability of work

Results in rural areas in the bottom part of the Table are similar. One exception is given by labor supply that appears to be positively correlated with the state of the local labor market. One obvious explanation for this apparently surprising result is that out-migration from rural areas might be higher the lower is labor demand, so that more youths stay when jobs are available, inducing some reverse causality in the regressions at hand. Although in principle one would want to re-impute back those who migrated from rural areas to urban areas in order to measure local labor supply (exactly as done in urban areas, where by converse migrants have been excluded) unfortunately there is no way with the ILFS data to know where migrants to cities come originally from (expect, generically whether they from an urban or rural part of the country). Differently for urban areas, distance to school appears an important determinant of youths; time use in rural areas, affecting both the probability of combining work and school and the probability of work (with a negative coefficient) and idleness and unemployment (with a positive coefficient). Increasing school distance reduces the incentives to combine part work and school for some individuals while leading to inactivity among others.

Results for girls in urban areas also illustrate relevant effects of both aggregate demand and supply on time use decisions. Results are qualitatively similar to men. One important exception is that lower labor demand tends to increase inactivity among girls. This is consistent with the notion that girls' inactivity in urban areas is a form of hidden unemployment. Individuals stop being available when the prospects of finding a job shrink. For girls in rural areas no noticeable differences from men need to be signaled.

In sum, there is evidence of teenagers' and youths' time use being strongly affected by local labor demand both in urban and rural areas. Distance to school infrastructures appears to be a problem in rural areas. Last, individuals' socio economic background, as proxied by the average education of other household members, is a strong predictor of these individuals' time use, being associated to a fall in work, unemployment and idleness and a rise in schooling.

Conclusions

ma come campano (crime illegal activities)

perche non vanno a scuola? (distance from school?)

Table 1A. Basic Time use patterns - MEN

Age Group	(1) <i>In education</i>	(2) <i>Never attended</i>	(3) <i>Working</i>	(4) <i>Combines work and education</i>	(5) <i>Not in education, not working</i>
Dar es Salaam					
Teens	0.581	0.026	0.206	0.036	0.249
Youth	0.142	0.042	0.472	0.020	0.407
Prime-age	0.000	0.021	0.974	0.000	0.026
Urban					
Teens	0.508	0.040	0.435	0.122	0.178
Youth	0.078	0.038	0.760	0.016	0.177
Prime-age	0.000	0.042	0.949	0.000	0.051
Rural					
Teens	0.391	0.146	0.761	0.219	0.067
Youth	0.023	0.154	0.922	0.009	0.065
Prime-age	0.000	0.192	0.968	0.000	0.032

Table 1B. Basic Time use patterns - WOMEN

Age Group	(1) <i>In education</i>	(2) <i>Never attended</i>	(3) <i>Working</i>	(4) <i>Combines work and education</i>	(5) <i>Not in education, not working</i>
Dar es Salaam					
Teens	0.442	0.036	0.265	0.027	0.319
Youth	0.054	0.043	0.374	0.009	0.580
Prime-age	0.000	0.120	0.693	0.000	0.307
Urban					
Teens	0.368	0.061	0.445	0.089	0.276
Youth	0.025	0.050	0.672	0.000	0.304
Prime-age	0.000	0.157	0.892	0.000	0.108
Rural					
Teens	0.343	0.186	0.762	0.169	0.065
Youth	0.012	0.213	0.924	0.007	0.071
Prime-age	0.000	0.474	0.951	0.000	0.049

Table 2A - Job characteristics - MEN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Occupation</i>								
Age Group	<i>Employee</i>	<i>Self-employed with employees</i>	<i>Self-employed, no employees</i>	<i>Unpaid family worker</i>	<i>Own farm</i>	<i>Usual hours</i>	<i>Multiple jobs</i>	<i>Under-employed</i>	<i>log wage</i>
Dar es Salaam									
Teens	40.76	0.00	27.20	22.75	9.29	53.061	0.003	0.066	4.475
Youth	47.38	1.72	38.36	6.65	5.88	58.077	0.021	0.042	5.121
Prime-age	54.46	10.32	30.00	0.00	5.22	57.808	0.078	0.010	6.020
Urban									
Teens	15.05	0.21	16.74	5.24	62.76	44.137	0.160	0.028	3.970
Youth	21.77	3.06	22.49	3.82	48.87	58.180	0.104	0.037	4.447
Prime-age	36.94	5.54	28.48	0.38	28.66	62.288	0.211	0.021	5.497
Rural									
Teens	3.63	0.04	2.32	3.47	90.54	43.116	0.125	0.048	3.697
Youth	5.62	0.34	4.63	0.83	88.57	52.876	0.183	0.057	4.011
Prime-age	8.95	0.99	4.44	0.25	85.37	54.701	0.240	0.033	5.180

Table 2B - Job characteristics - WOMEN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Occupation</i>								
Age Group	<i>Employee</i>	<i>Self- employed with employees</i>	<i>Self- employed, no employees</i>	<i>Unpaid family worker</i>	<i>Own farm</i>	<i>Usual hours</i>	<i>Multiple jobs</i>	<i>Under- employed</i>	<i>log wage</i>
Dar es Salaam									
Teens	52.06	0.42	26.12	15.24	6.16	56.324	0.036	0.071	3.747
Youth	36.38	2.77	53.82	4.37	2.66	54.724	0.025	0.136	4.646
Prime-age	27.22	3.27	55.79	0.39	13.34	50.425	0.070	0.104	5.972
Urban									
Teens	16.77	1.27	11.72	20.86	49.39	43.443	0.187	0.122	3.518
Youth	19.08	1.08	35.18	6.51	38.14	48.976	0.150	0.078	4.117
Prime-age	14.12	5.85	28.40	2.88	48.77	52.829	0.263	0.095	5.649
Rural									
Teens	1.86	0.00	1.91	5.16	91.06	41.728	0.136	0.080	3.531
Youth	1.32	0.28	1.94	1.38	95.08	46.943	0.149	0.109	4.388
Prime-age	2.29	0.19	3.03	0.78	93.70	48.642	0.199	0.082	5.070

Table 3A. Unemployment and inactivity – MEN

	(1)	(2)	(3)	(4)	(5)
	<i>Active (ILO)</i>	<i>Unemp. rate (ILO)</i>	<i>Unemp.to Population Ratio</i>	<i>Available & no search</i>	<i>Not available</i>
Dar es Salaam					
Teens	0.386	0.465	0.179	0.027	0.054
Youth	0.790	0.403	0.318	0.020	0.073
Prime-age	0.989	0.015	0.015	0.004	0.007
Urban					
Teens	0.498	0.126	0.063	0.035	0.082
Youth	0.850	0.106	0.090	0.016	0.077
Prime-age	0.965	0.017	0.016	0.005	0.030
Rural					
Teens	0.773	0.016	0.012	0.025	0.037
Youth	0.936	0.015	0.014	0.019	0.032
Prime-age	0.974	0.007	0.007	0.007	0.018

Table 3B. Unemployment and inactivity - WOMEN

	(1)	(2)	(3)	(4)	(5)
	<i>Active (ILO)</i>	<i>Unemp. rate (ILO)</i>	<i>Unemp.to Population Ratio</i>	<i>Available & no search</i>	<i>Not available</i>
Dar es Salaam					
Teens	0.466	0.431	0.201	0.061	0.070
Youth	0.679	0.449	0.305	0.091	0.185
Prime-age	0.778	0.109	0.085	0.056	0.166
Urban					
Teens	0.472	0.057	0.027	0.118	0.138
Youth	0.750	0.104	0.078	0.083	0.143
Prime-age	0.906	0.015	0.014	0.041	0.053
Rural					
Teens	0.767	0.007	0.005	0.031	0.038
Youth	0.935	0.012	0.011	0.021	0.039
Prime-age	0.954	0.004	0.003	0.007	0.039

Table 4A. Reasons for not looking/inactivity – MEN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Reason not look</i>						<i>Reason not available</i>		
	<i>Thought would not find</i>	<i>Waiting for job /reply</i>	<i>Off-season</i>	<i>HH duties</i>	<i>temporarily ill</i>	<i>Other</i>	<i>HH duties</i>	<i>Sick</i>	<i>other</i>
Dar es Salaam									
Teens	64.48	13.58	0.00	3.16	3.60	15.18	28.03	11.26	60.71
Youth	25.55	32.48	0.00	2.68	0.00	39.30	18.71	24.71	56.57
Prime-age	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Urban									
Teens	28.28	48.83	0.00	7.53	1.48	13.88	25.83	31.66	42.51
Youth	51.83	21.84	0.00	18.02	0.00	8.31	16.85	15.74	67.41
Prime-age	16.20	7.01	38.32	0.00	0.00	38.47	12.56	83.41	4.03
Rural									
Teens	17.43	22.11	8.25	30.70	1.32	20.18	22.67	45.91	31.42
Youth	19.92	27.88	8.68	37.59	0.00	5.93	10.49	58.62	30.89
Prime-age	33.80	39.35	17.72	9.13	0.00	0.00	3.17	92.11	4.73

Table 4B. Reasons for not looking/inactivity – WOMEN

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Reason not look</i>						<i>Reason not available</i>		
	<i>Thought would not find</i>	<i>Waiting for job /reply</i>	<i>Off-season</i>	<i>home duties</i>	<i>ill</i>	<i>Other</i>	<i>HH duties</i>	<i>Sick</i>	<i>other</i>
Dar es Salaam									
Teens	59.98	8.50	0.00	12.47	1.00	18.05	43.03	17.62	39.35
Youth	67.49	2.72	0.00	24.56	0.00	5.23	73.14	15.12	11.74
Prime-age	42.85	19.90	16.65	17.02	0.00	3.58	77.75	20.14	2.11
Urban									
Teens	16.67	28.89	1.65	48.00	0.00	4.80	40.47	18.12	41.41
Youth	15.37	17.94	3.48	47.06	1.78	14.37	45.83	27.62	26.56
Prime-age	36.49	20.49	10.26	29.08	0.00	3.68	46.36	46.87	6.77
Rural									
Teens	17.15	18.31	20.80	28.63	0.00	15.11	21.42	54.89	23.69
Youth	22.39	5.15	18.50	46.57	0.00	7.39	24.31	57.10	18.58
Prime-age	47.23	25.34	14.32	0.00	8.13	4.99	12.77	85.83	1.40

Table 5A- Characteristics of the unemployed – MEN

	(1)	(2)	(3)	(5)	(6)	(7)
	<i>Search Methods</i>					
	<i>Enquiry with employer</i>	<i>Family and friends</i>	<i>Attempt to start own business</i>	<i>LTU</i>	<i>Very LTU.</i>	<i>Unemployment duration</i>
Dar es Salaam						
Teens	75.31	18.96	5.73	0.487	0.265	3.596
Youth	58.37	30.76	10.87	0.798	0.488	9.131
Prime-age	64.26	8.91	26.83	0.599	0.499	3.392
Urban						
Teens	67.79	28.56	2.19	0.701	0.525	5.025
Youth	79.25	12.93	7.82	0.737	0.646	5.660
Prime-age	89.46	0.00	10.54	0.493	0.367	1.974
Rural						
Teens	39.69	25.89	28.11	0.245	0.208	1.776
Youth	51.06	20.15	24.83	0.265	0.156	1.730
Prime-age	64.55	5.89	29.56	0.334	0.237	1.677

Table 5B- Characteristics of the unemployed – WOMEN

	(1)	(2)	(3)	(5)	(6)	(7)
	<i>Search Methods</i>					
	<i>Enquiry with employer</i>	<i>Family and friends</i>	<i>Attempt to start own business</i>	<i>LTU</i>	<i>Very LTU.</i>	<i>Unemployment duration</i>
Dar es Salaam						
Teens	55.16	38.40	5.23	0.599	0.373	4.715
Youth	53.55	29.21	17.24	0.619	0.432	5.894
Prime-age	36.46	19.44	41.21	0.498	0.445	2.805
Urban						
Teens	63.13	21.85	15.03	0.663	0.563	3.514
Youth	59.14	17.44	20.27	0.784	0.634	5.430
Prime-age	56.90	11.95	31.15	0.838	0.616	9.271
Rural						
Teens	44.33	0.00	55.67	0.266	0.222	1.634
Youth	67.73	0.00	27.58	0.310	0.190	1.579
Prime-age	69.07	0.00	30.93	0.224	0.189	1.427

Table 6A
Youths' and Teenagers' Education and labor market outcomes
Individuals out of school
Urban Males

	(1) Work	(2) Unemployed (if active)	(3) Active	(4) log wages	(5) Work	(6) Unemployed (if active)	(7) Active	(8) log wages
Level education 2	0.016 (0.070)	0.110 (0.073)	0.127** (0.054)	-0.598** (0.252)	0.150** (0.071)	0.096 (0.076)	0.252*** (0.055)	-0.216 (0.258)
Level education 3	0.020 (0.054)	0.098* (0.059)	0.126*** (0.042)	-0.458** (0.204)	0.258*** (0.060)	0.059 (0.069)	0.342*** (0.047)	0.247 (0.239)
Level education 4	-0.165** (0.065)	0.255*** (0.067)	0.062 (0.050)	0.070 (0.255)	0.262*** (0.074)	0.105 (0.080)	0.405*** (0.057)	1.398*** (0.304)
Age controls	yes	yes	yes	yes				
Exp. controls					yes	yes	yes	yes
Obs.	1263	1039	1263	282	1263	1039	1263	282

The table reports the coefficient of an OLS regression of each of the dependent variables (in the top row) on education dummies (incomplete basic, completed basic, at least one year of secondary education). All regressions control for regional dummies plus quarter of year dummies. Regressions in columns 1 to 4 control additionally for a quadratic term in age. Columns 5 to 8 report the same regressions with controls for potential experience (age minus highest grade attended) rather than age. All regressions refer to urban areas only and are restricted to individuals out of school aged 15-24. Regressions are weighted by sampling weights. Standard error in parentheses.

Table 6B
 Youths' and Teenagers' Education and labor market outcomes
 Individuals out of school
 Urban Females

	(1) Work	(2) Unemployed (if active)	(3) Active	(4) log wages	(5) Work	(6) Unemployed (if active)	(7) Active	(8) log wages
Level education 2	0.006 (0.058)	0.094 (0.058)	0.075 (0.055)	-0.324 (0.215)	-0.146** (0.068)	0.069 (0.045)	-0.083 (0.061)	-2.139*** (0.575)
Level education 3	0.013 (0.045)	0.094** (0.047)	0.091** (0.043)	0.053 (0.148)	0.013 (0.086)	-0.008 (0.055)	0.008 (0.078)	-0.599*** (0.203)
Level education 4	-0.048 (0.054)	0.178*** (0.055)	0.094* (0.051)	0.859*** (0.176)	0.080 (0.119)	-0.018 (0.076)	0.082 (0.107)	-
Age controls	yes	yes	yes	yes				
Exp. controls					yes	yes	yes	yes
Obs.	415	356	415	94	415	356	415	94

See notes to Table 6a.

Table 7A
Determinants of teenagers' and youths' time use
Males

	(1) Work	(2) School	(3) School and work	(4) Unempl.	(5) Idle
Urban					
Adult emp. rate	0.490* (0.294)	-0.337 (0.258)	0.082 (0.152)	-0.019 (0.233)	-0.052 (0.172)
Share youth	-0.400** (0.155)	0.003 (0.136)	-0.240*** (0.081)	0.039 (0.123)	0.118 (0.091)
Time to school	0.033 (0.077)	0.111 (0.068)	0.016 (0.040)	-0.227*** (0.061)	0.099** (0.045)
Training	0.127*** (0.039)	-0.171*** (0.035)	-0.013 (0.020)	0.019 (0.031)	0.012 (0.023)
Migrant	-0.010 (0.025)	-0.060*** (0.022)	-0.010 (0.013)	0.011 (0.020)	0.047*** (0.015)
HH educ.	-0.014** (0.005)	0.058*** (0.005)	0.003 (0.003)	-0.021*** (0.004)	-0.020*** (0.003)
Observations	1964	1743	1964	1964	1964
Rural					
Adult emp. rate	0.902*** (0.185)	-0.217 (0.181)	0.265 (0.164)	-0.334*** (0.088)	-0.085 (0.095)
Share youth	0.342** (0.137)	0.128 (0.134)	0.304** (0.122)	0.020 (0.065)	-0.185*** (0.070)
Time to School	-0.044*** (0.008)	-0.010 (0.008)	-0.027*** (0.007)	0.013*** (0.004)	0.015*** (0.004)
Training	0.023 (0.037)	-0.058 (0.037)	-0.020 (0.033)	-0.005 (0.018)	0.020 (0.019)
Migrant	0.003 (0.022)	-0.032 (0.021)	-0.003 (0.019)	0.026** (0.010)	-0.000 (0.011)
HH educ.	-0.014*** (0.003)	0.023*** (0.003)	0.007** (0.003)	-0.001 (0.002)	-0.000 (0.002)
Observations	3939	3939	3939	3939	3939

The table reports the coefficient of an OLS regression of each of the dependent variables (in the top row) on the following variables: prime age local employment, share of individuals aged 15-24 over working age population (restricted to individuals who were born in that area), average travel time to secondary school (in hours), a dummy for whether the individual received training, a dummy for migrants and average education of other household members. All regressions control additionally for age dummies, dummies, the number of other household members in each 5-year age cell, separately by sex, quarter of year dummies. Regressions for urban areas additionally include a dummy for DES. All regressions refer to individuals out aged 15-24. Regressions are weighted by sampling weights. Standard error in parentheses.

Table 7B
Determinants of teenagers' and youths' time use
Females

	(1) Work	(2) School	(3) School and work	(4) Unempl.	(5) Idle
Urban					
Adult emp. rate	0.279** (0.136)	-0.045 (0.104)	-0.052 (0.057)	0.039 (0.115)	-0.325*** (0.100)
Share youth	-0.547*** (0.111)	0.076 (0.085)	-0.169*** (0.046)	0.240** (0.094)	0.062 (0.082)
Time to School	0.048 (0.082)	0.142** (0.063)	0.067** (0.034)	-0.164** (0.070)	0.042 (0.061)
Training	0.071* (0.038)	-0.083*** (0.029)	-0.015 (0.016)	-0.023 (0.032)	0.020 (0.028)
Migrant	0.083*** (0.022)	-0.076*** (0.017)	-0.005 (0.009)	-0.010 (0.019)	-0.002 (0.016)
HH educ.	-0.010** (0.005)	0.025*** (0.004)	-0.009*** (0.002)	-0.016*** (0.004)	-0.009** (0.004)
Observations	2360	2360	2360	2360	2360
Rural					
Adult emp. rate	0.459** (0.180)	0.019 (0.165)	0.142 (0.144)	-0.199** (0.087)	-0.137 (0.099)
Share youth	0.091 (0.122)	-0.123 (0.112)	-0.036 (0.097)	-0.030 (0.059)	0.027 (0.067)
Time to School	-0.013* (0.007)	-0.041*** (0.006)	-0.029*** (0.006)	0.015*** (0.003)	0.010*** (0.004)
Training	0.030 (0.042)	-0.063* (0.038)	-0.020 (0.033)	-0.024 (0.020)	0.037 (0.023)
Migrant	-0.005 (0.018)	-0.001 (0.017)	-0.001 (0.015)	-0.011 (0.009)	0.016 (0.010)
HH educ.	-0.010*** (0.003)	0.017*** (0.003)	0.007*** (0.002)	-0.002 (0.001)	0.001 (0.002)
Observations	3947	3947	3947	3947	3947

See notes to Table 7a