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The Working Lives of 1250 Urban Youth in Benin

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Abstract: We analyze the baseline and first follow-up round of a labor market survey conducted with 1244 youth from urban areas in Benin. Early analysis shows that youth activity is more dynamic than typically portrayed, with youth frequently transitioning between self-employment, wage employment, and inactivity after completing their education or training. Apprentices are shown to leave school earlier, come from less educated households, and be less likely to find wage employment than those who continue their education into their 20s. Self-employment is the most likely outcome regardless of education track, both according to the data and to youths' expectations. Youth who have already achieved self-employed status are more likely to have moved away from their parents, be married, and have started a family. Young job-seekers not in education or training blame weak labor market demand and their own inadequate skills for their difficulties in securing e mployment. A high response rate to the first follow-up survey (nearly 90%) suggests that phone surveys may be a cost-efficient method for collecting panel data on youth.

Keywords: Regional Labor Markets, Urban Employment, Informal Economy, Firms and Development, Vocation Schooling

JEL classification codes: J13, J24, J46, J62

1 Introduction

When formal jobs are lacking, as they are in much of the developing world, growing youth populations present a major challenge to policy makers. The African labor force is expected to add some 300 million workers between 2018 and 2030, pushing the total size of the workforce to over a billion. Formal employers will not be able to match this rapid growth in labor supply, leaving youth to rely on informal jobs and self-employment to secure a living.

Youth transitioning from school into such informal economies face a myriad of poorly understood challenges. Official labor market data in developing countries is infrequent and unreliable, and where it does exist, it is generally too limited to provide youth-specific insights. In response to the youth employment crises flaring up across the developing world, a recent influx of small-scale surveys have been introduced with an explicit focus on youth; unfortunately, these only covered a handful of countries before being discontinued. The high cost of repeated face-to-face surveys is a major reason for this paucity of youth data, even as interest in the demographic grows in step with the employment crisis. Moreover, there is little information on the trajectories of youth over time, a major drawback given the strong past dependency of employment choices (Shehu and Nilsson 2014). To remedy this problem, we develop a lightweight survey that generates low-cost longitudinal data on youth by supplementing a standard face-to-face baseline interview with a series of short, remote surveys conducted by mobile phone.

The survey has three principle aims. First, it tests the viability of this approach for the specific purpose of studying youth working conditions in low-income countries. Young people, particularly those living in urban areas, are more literate, technologically savvy, and likely to own a mobile phone than the general population. We think that this could lead to lower attrition than comparable phone-based surveys conducted in low-income settings. Second, it provides a glimpse into the life of youth in all its copious variety: from the working lives of the wage and the self-employed to the ambitions of those still in school and the trials and tribulations of those inactive or seeking work. Finally, the survey provides an in-depth look into the lives of apprentices. Although traditional apprenticeships with small-scale craftsmen are an important source of skill development in many developing countries, particularly in West Africa, the lives and working conditions of youth training in informal firms are still poorly understood.

In this paper, we present the results of the baseline and first follow-up round of the survey. The target population is youth aged 20-29 living in Cotonou and Porto-Novo, the two largest cities in Benin. The baseline was conducted in person and took just under 20 minutes for the median respondent, while the first round of phone-based follow-up surveys, designed to be shorter, took a median of 13 minutes and 51 seconds. Identical follow-up surveys will be conducted up to 5 additional times over the course of the next year.

The paper is structured as follows. First, we present the motivation for and context of the study. Second, we describe the data collection and our sample of surveyed youth. Third, we present a subgroup analysis of youth by their primary activity. Fourth, we discuss the results of the follow-up survey. We conclude with a brief discussion of the results.

2 Motivation

This study is motivated by the lack of empirical evidence on the determinants of quality employment among youth. Despite the rising urgency of the youth employment problem, there is a paucity of evidence on this particular demographic. Most of what we know comes from household and labor force surveys, which are generally too broad to include detailed questions tailored specifically to youth. For example, Filmer and Fox (2014), the most recent and complete compendium of knowledge on youth

employment in Africa, relies primarily on harmonized national household and labor force surveys for analysis.

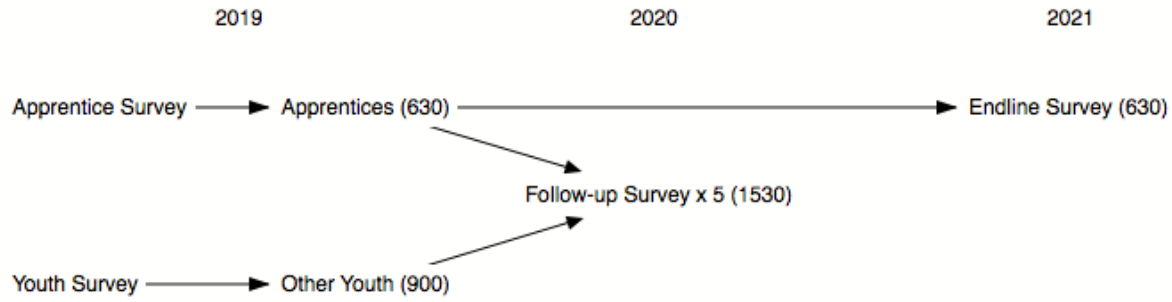
The few surveys specifically developed to study employment-age youth include the World Bank's STEP skills surveys, the ILO's School-to-Work Transition Surveys (SWTS), and the 1-2-3 Surveys conducted by DIAL of Paris-Dauphine University. These surveys have the drawback of being cross-sectional in nature, making it impossible to study the dynamics of youth's transition to work. Important questions regarding, for instance, the most-travelled paths to quality employment, determinants of unemployment duration, or the "permeability" - ease of transition - between activities are left unaddressed due to data limitations. The SWTS data, collected in 33 countries (eight in SSA) between 2012 and 2015, include a longitudinal component. Respondents are asked to recall their activities (employment, self-employment, housework, etc) over the past decade and more. We adopt this method for measuring retrospective youth trajectories, though we supplement it with the follow-up surveys with each youth to generate a more precise time series. By obtaining updates in real-time, we thus mitigate the recall bias inherent to such "personal history" questions.

The need to develop cost-effective methods for surveying youth is an additional motivating factor for this study. Previous studies suggest that response rates are highly sensitive to the context and target population of the study. Phone-based surveys are increasingly being used to reach at-risk populations in crisis situations, albeit with uneven success (Ballivian, Azevedo, and Durbin 2015; Etang-Ndip, Hoogeveen, and Lendorfer 2015; Leidich et al. 2018). Low response or high attrition rates have been found to be risk factors for high-frequency phone-based surveys (Hoogeveen, Croke, Dabalen, Demombynes, and Giugale 2014; Lau, Gachugu, Johnson, and Marks 2018). Other studies have systematically varied compensation schemes (Demombynes, Gubbins, and Romeo 2013) and survey frequency (Garlick, Orkin, and Quinn 2019) without finding significant impacts on attrition rates. The upside of risking high attrition rates with remote surveys are the major savings on survey costs: Garlick et al. (2019) report that phone-based interviews with South African micro-business owners reduced costs by 25% per interview relative to in-person interviews, without any perceptible drop in data quality or internal consistency. By comparison, our remote surveys were roughly 75% less expensive than those conducted in person.

3 Data and Definitions

The baseline survey was conducted with a total of 1530 youth. We exclude nearly 300 apprentices from rural areas from the analysis in this paper, which focuses on urban youth only. The structure and timing of the survey is shown in Figure 1 below. The baseline was divided into two phases: in the first phase, 630 youth from a pool of applicants to a national apprenticeship program were interviewed. In the second phase, 900 youth – excluding apprentices – were randomly selected from the city of Cotonou and the surrounding urban areas. After three months, all 1530 youth were recontacted for the first round of the remote follow-up survey. The same follow-up survey will be repeated every three months for five additional rounds. Depending on funding, a face-to-face endline survey may be conducted with the apprentices in 2021.

Figure 1: Structure of Survey



The data for this study is based on face-to-face interviews conducted with youth in the cities of Cotonou and Porto-Novo, Benin. Benin is a small, cotton-exporting West African country with both a highly informal economy and a high intensity of apprenticeship training. Cotonou is its largest city and its economic center and seat of government. Porto-Novo is the official capital. Both are port cities and major transportation hubs for West Africa, and home to roughly 700,000 and 300,000 people respectively. Close to 90% of the Beninese economy is informal, dominated by the informal micro-enterprise (IME). As in much of West Africa, IMEs plying traditional crafts such as weaving or pottery are referred to as *l'artisinat*, while activities tied to more recent technologies, such as welding or auto repair, are called *les petits métiers* (Haan 2006).

Data was collected in two rounds. The first round was conducted between July and August 2019 with 630 youth who had applied to be part of the 2019 cohort of a national, government-supported training program called the *Certificat de Qualification Professionnelle* (CQP). Apprentices training in (mostly) informal firms were the explicit focus of this survey. They were asked about their working lives, training conditions, and basic demographic and socioeconomic characteristics, and asked to complete a short battery of trade-specific knowledge questions. These face-to-face interviews took place in various locations across southern Benin, as the location of workshops accredited by the CQP program are dispersed across the country.

The second round was conducted in August and September 2019 with a randomly selected sample of youth from Cotonou, Abomey-Calavi, and the surrounding areas. The selection criteria for this sample were youth who (*i*) were not participating in an apprenticeship, and (*ii*) were between the ages of 20 and 29 at the time of the interview. They represent all other possible stations of life open to young adults: from early wage jobs and self-employment, to higher education, homemaking, or economic unemployment or inactivity.

3.1 Sampling Approach

As outlined above, the final sample for the survey was composed of two parts, the first of which addressed apprentices only, whereas the second targeted youth engaged in all other activities. The sampling frame for former consisted of all application dossiers for the CQP apprenticeship program described above, which were digitized in December 2018. Selection criteria for the CQP program included the fulfillment of basic entry requirements such as minimum age and training experience, an entry examination score, and the proximity of the next training center in the desired craft to the apprentice's domicile. The program provides training in 13 crafts, with a 14th being introduced in 2019. We focus on masonry, carpentry, plumbing, metalworking, and electricity due to the higher participation rates in these trades and the proximity of the relevant training centers to Cotonou, where the surveying team was based.

The sampling approach for the remaining youth consisted of a two-stage design, first clustering on administrative *zones de dénombrement* (ZDs), then on individuals within the chosen age range (Deaton 1997). The sample frame was generated by means of an impromptu census of all households conducted several weeks before the baseline survey. First, we interviewed all households from 14 ZDs in Cotonou and two neighboring communes, Sèmè-Kpodji and Abomey-Calavi. These were included to better represent the entire urban agglomeration of Cotonou, which extends beyond its administrative borders. In this census, respondents (one per household, not necessarily the household head) reported the main activity of all household members from six options (permanent or temporary wage employment, self-employment, student, apprentice, or other). It covered a total of 19,032 individuals from 4,905 households, of whom 3,682 individuals were aged 20-29. The activities of this subgroup is summarized in Table 1 below. The most common occupations for the target age group of 20 to 29 were self-employment and education, each accounting for roughly a third of the sample. Only 11.8% of these young adults were reported to have a permanent or seasonal salary, compared to 17.3% of all adults 30 and above. The average age of all apprentices surveyed for the census was 18.5 years, explaining their relatively low representation in the age-restricted sample (7.8% of 20 to 29-year-olds, compared to 15.5% of youth aged 15 to 19).

Table 1: Census of Youth in Cotonou Area

	Aged 15-19		Aged 20-29		Aged 30 and above	
School	1417	(71.64)	1144	(31.07)	87	(1.35)
Other	125	(6.32)	635	(17.25)	1574	(24.35)
Self-Employed	95	(4.80)	1183	(32.13)	3664	(56.68)
Wage Employed	35	(1.77)	433	(11.76)	1117	(17.28)
Apprentice	306	(15.47)	287	(7.79)	22	(0.34)
Total	1978	(100.00)	3682	(100.00)	6464	(100.00)

(% in parentheses)

Source: authors' compilation based on data.

The final sample was chosen randomly from all youth of the appropriate age who were not participating in an apprenticeship at the time of the census. The surveyors then arranged for an in-person interview with the youth with the help of the physical address (or, more often, a description of the location) and phone numbers from the census data. Unfortunately, the contact information, provided by a single family member, was often inaccurate (or perhaps even intentionally misleading). As a result, many of the sampled youth were older or younger than the age cutoff, happened to be abroad, or simply did not exist when the survey team attempted to establish contact. Replacements were chosen to have the same occupation and to live in the same *arrondissement* (or, in rural areas, *quartier*) – a smaller administrative area than the ZD, with about 230 youth per arrondissement. Once available youth for a given occupation and arrondissement were exhausted, replacements were made randomly.

3.2 The Sample

Due to the difficulties with replacing missing youth, the final youth sample deviated from the representative distribution shown in Table 1. Aside from apprentices, who are overrepresented in the final sample by design, the proportion of self-employed youth and in-school youth is smaller and the proportion of wage earners and youth not in education, employment or training (designated "Other" in the census) is larger than the census distribution. Self-employed, informal workers tend to be both less educated and more wary of government attention, which may signal impending taxation, coercion, or other unpleasant arm-twisting. This may explain the particularly low rate of response to our survey from this group.

Participation in informal apprenticeship is heavily dependent on gender, with certain trades, such as women's hairdressing or gastronomy, dominated by women, and others, such as construction, auto repair, and electrical wiring and installation, being essentially monopolized by men. The CQP program only covers 14 trades, of which five were selected for the survey: plumbing, electrical installation, ma-

Table 2: Distribution of Activities in Baseline Survey

Activity	Female		Male		Total	
School	83	(17.36)	107	(13.97)	190	(15.27)
NEET	188	(39.33)	86	(11.23)	274	(22.03)
Self-Employed	92	(19.25)	75	(9.79)	167	(13.42)
Wage Employed	82	(17.15)	102	(13.32)	184	(14.79)
Apprentice	33	(6.90)	396	(51.70)	429	(34.49)
Total	478	(100.00)	766	(100.00)	1244	(100.00)

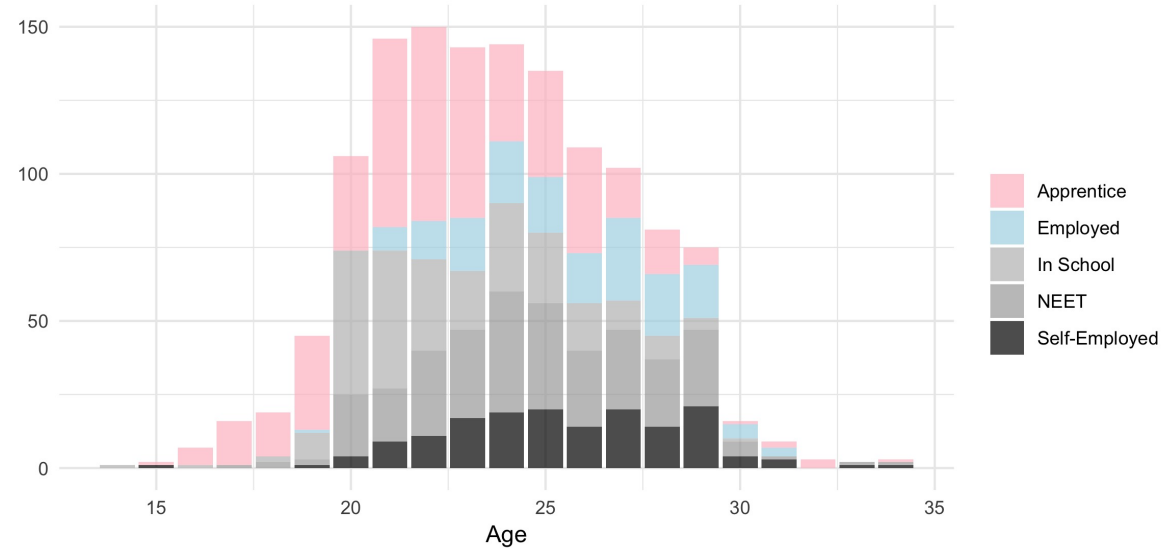
Notes: *(% in parentheses)*

Source: authors' compilation based on data.

sonry, carpentry, and metal construction[1]. All are among those crafts traditionally dominated by males. As a result, the respondents to the CQP survey are predominantly young men, as shown in Table 2. Large numbers of apprentices of masonry and metal construction were surveyed but are excluded from this analysis of urban youth, as most CQP training centers for masonry and metal construction happened to be concentrated in rural areas.

While by international convention youth are defined to be aged 15 to 24, the transition from school to employment often takes much longer, particularly in developing countries (Filmer and Fox 2014). Several surveys focusing on youth, including the SWTS, extended the upper limit of the age range to 29. We limit participation to youth between the ages of 15 and 29 for the apprentices and 20 to 29 for the remaining respondents. The age distribution for both surveys is shown in Figure 2: apprentices are 22.4 years old on average, compared to 24.5 years for the remaining youth.

Figure 2: Age Distribution of Respondents



Source: authors' compilation based on data.

Observations in the youth survey that fall outside the target 20-29 range are due to inconsistencies between the age (in number of years) reported by the respondent, which was used as a criterion for determining eligibility to participate, and their age based on their reported birth year. As may be expected,

[1] These particular trades were chosen based on participation rates (which were in turn determined by apprentice demand and the availability of training facilities) and the proximity of training centers to Cotonou, which served as the base for the survey team.

youth attending school are on average younger than those working or not employed, in education, or in training.

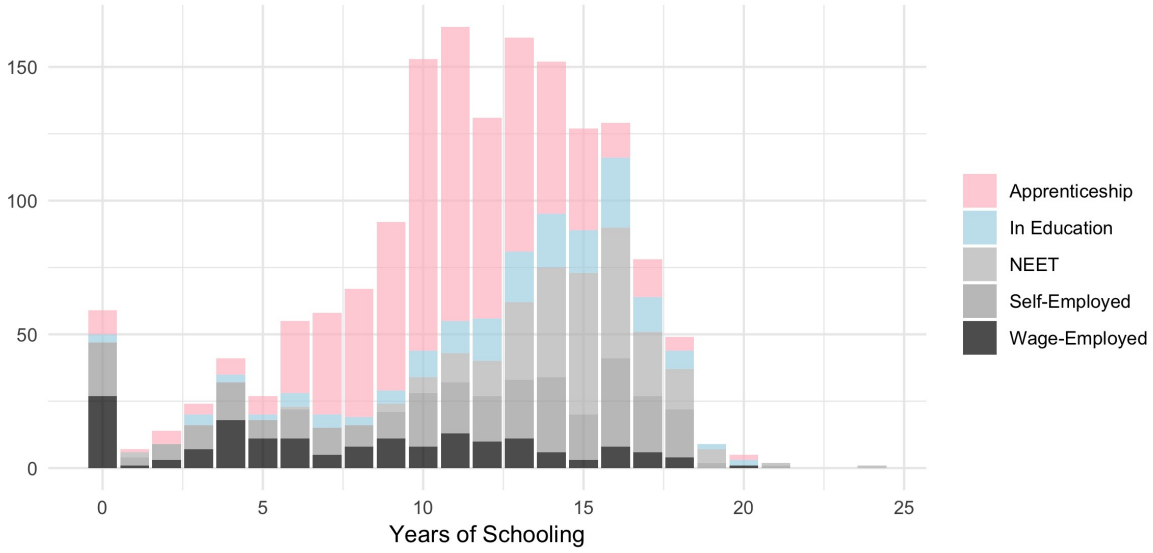
4 Results

4.1 Education

Educational attainment has been increasing at a rapid rate in Sub-Saharan Africa (World Bank 2017). Returns to education in developing countries are generally highest for primary education and lowest for tertiary education, but differ significantly by country and gender and between rural and urban areas (Psacharopoulos and Patrinos 2004; Peet, Fink, and Fawzi 2015). Evidence from the SWTS shows that investing in education increases the chance of escaping informal employment. However, by driving up reservation wages, increasing educational attainment can also turn youth from "creators" to "seekers" of jobs (Baah-Boateng 2013). In fact, those with less education have been shown to experience lower rates of unemployment in other urban areas in West Africa (Nordman and Pasquier-Doumer 2014).

Figure 3 shows the distribution of schooling attainment by activity among Benin's urban youth. Self-employed youth and apprentices have attended less school on average than those still in the education system, the wage-employed, and, interestingly, inactive youth (NEET). This may suggest that the education system in Benin is a high-risk, high-reward undertaking: extended attendance could lead to a sought-after wage job, but at the risk of extended inactivity. Alternatively, the education system may be an alternative to inactivity for those who can afford it and cannot find a satisfactory job. In any case, the significantly lower average duration of school attendance for the self-employed suggests that education is not a prerequisite for starting a business in Benin.

Figure 3: Educational Attainment by Activity



Source: authors' compilation based on data.

The distribution of schooling attainment by activity is shown in Figure 3. Urban youth in our sample had completed 11.4 years of school on average at the time of the survey. Even youth who had already exited the education system (and thus have both less schooling on average and are less likely to continue accruing it) report having completed an average of 10.8 years of school – much higher than the 5.7 years for 20- to 24-year-olds and the 4.4 years for 25- to 29-year-olds in Benin estimated in 2010 (Barro and

Lee 2013). This suggests that schooling rates are indeed increasing at a rapid rate, though schooling is also likely to be longer in urban areas such as Cotonou and Porto-Novo relative to rural areas.

Table 3: Average Years of Schooling by Activity

School	NEET	Self	Wage	Apprentice
14.76	11.05	8.611	12.98	10.66
(15)	(12)	(8)	(14)	(11)

(median in parentheses)

Source: authors' compilation based on data.

Table 3 highlights the major disparity in educational attainment between self-employed workers and the rest of the sample. Self-employed workers tend to drop of out school earlier and enter the labor force sooner. Self-employed youth often become so by necessity, as their families cannot afford to support continuing schooling or an extended search for a wage job.

Table 4: Educational Background by Activity

	School	NEET	Self	Wage	Apprentice
Completed apprenticeship	0.04	0.19	0.41	0.22	0.10
Completed primary school	0.99	0.77	0.56	0.92	0.91
At least some secondary	0.95	0.66	0.39	0.81	0.56
Completed secondary school	0.69	0.31	0.15	0.35	0.06
Father completed apprenticeship	0.28	0.33	0.35	0.35	0.51
Father at least some secondary	0.48	0.37	0.24	0.37	0.31
Mother completed apprenticeship	0.18	0.18	0.13	0.14	0.16
Mother at least some secondary	0.19	0.18	0.09	0.17	0.10

Source: authors' compilation based on data.

Master craftsmen report that it is more difficult than ever to find motivated apprentices, as youth prefer to stay in school and take their chances at finding waged employment. Indeed, most youth report having received significantly more educational attainment than their parents, with 65.9% of the sample reporting having completed at least some secondary school, compared to 35.4% of their fathers and 15% of their mothers. About half of the apprentices in the sample finished their schooling at the primary level, presumably to then enter an apprenticeship. The remaining half dropped out of secondary school to begin their training.

Both the duration and the type of education (formal or apprenticeship) appear to carry lasting implications for the employment of youth. Self-employed youth are more likely than any other group to have already completed an apprenticeship, while the wage employed are the most educated (in terms of time spent in school) of all youth no longer in school. Almost half of the apprentice sample (nearly all of it male) has a father who completed an apprenticeship, while those still in school into their twenties have by far the most educated parents, suggesting that there may be some occupation correlation across generations (Pasquier-Doumer 2013).

When apprentices are excluded from the sample, we note that some of the gender imbalance in educational attainment persists, despite the spectacular growth in overall attainment compared with even just the previous generation. 79.8% of young men report having completed at least some secondary schooling, compared to 63.7% of young women, and 46.1% of men report holding a *Baccalauréat* (high school degree) compared to 28.8% of women.

4.2 Living Conditions

Some basic indicators of living conditions for the entire sample are presented in Table 5. Most youth in the sample live with their parents; apprentices and youth still in school are particularly likely to do so. This is perhaps unsurprising given that apprentices are, on average, more than 2.5 years younger than the rest of the sample. The self-employed are the most likely to be married and moved out from their

parents, and have the most children on average. Virtually all respondents (99%) who reported "living with their spouse" were women.

Table 5: Current living conditions

	School	NEET	Self	Wage	Apprentice
Mean age	22.71	24.70	25.54	25.51	22.54
Married	0.04	0.27	0.33	0.16	0.04
Number of children	0.12	0.98	1.37	0.54	0.12
Living with parents	0.63	0.38	0.33	0.38	0.59
Hard floor in home	0.84	0.78	0.78	0.80	0.82
Own cell phone	0.66	0.76	0.80	0.73	0.83
Own smartphone	0.62	0.45	0.39	0.62	0.33
Own computer	0.23	0.18	0.14	0.14	0.13
Own motorcycle	0.19	0.20	0.38	0.35	0.17
Own TV	0.28	0.38	0.46	0.43	0.30

Source: authors' compilation based on data.

4.3 Satisfaction and Aspriations

Two indicators of satisfaction are reported in Table 6, measured on a Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). The first indicator reports youths' self-reported satisfaction with their current activity. For instance, those still in school were asked how satisfied they were with their current educational program. Those neither in education, employment, or training (NEET) were not asked about their satisfaction with their current primary activity, on account of not having one. The second measure concerns general life satisfaction. All youth were asked, "taken all things together, how satisfied are you with your life as a whole these days?"

Table 6: Self-reported Satisfaction

	School	NEET	Self	Wage	Apprentice
Satisfaction with activity	4.032	.	3.629	3.418	4.371
Life Satisfaction	3.826	3.343	3.305	3.462	4.054

Source: authors' compilation based on data.

The relatively high level of satisfaction reported by apprentices may be a result of the presence of their master trainers, as most interviews took place at the workshop during working hours. The fact that wage workers report lower satisfaction with their jobs than the self-employed contrasts with the findings of Shehu and Nilsson (2014), who find that informal workers have lower satisfaction that wage workers in 19 out of the 20 countries studied. Our findings are more in line with Falco, Maloney, Rijkers, and Sarrias (2015), who find no discernible differences in subjective satisfaction between the formal salaried sector and informal self-employment (and in fact find higher satisfaction among the self-employed who hire employees).

While in high-income countries, firms generally train with the intention of either hiring the trainees after graduation or contributing to a shared pool of skilled workers (Culpepper 2001), the archetypal informal apprenticeship in developing countries prepares youth for a self-employed career. This characterization is supported by Table 7, which shows that apprentices in Benin predominantly aspire to open their own business upon graduation. Unlike the education system, in which the likelihood of remaining in the system increases with each additional year of schooling, apprenticeship is a one-off affair - almost no apprentices report interest in a subsequent apprenticeship following the completion of their current one (though 4% hope to reenter the education system). Table 7 also highlights apprentices' desire for independence from their patron. According to certain theoretical accounts of apprenticeship training, the very firm-specific nature of the skills imparted by the master trainer makes him the most likely employer of the apprentice after graduation (as the apprentice's productivity is much greater in his firm than any other). However, a mere 4.4% of apprentices foresee staying with their patron.

Table 7: What do you plan on doing after graduating?

	School	Apprentice	Total
Look for a job	51	55	106
	(26.84)	(12.82)	(17.12)
Start own business	37	323	360
	(19.47)	(75.29)	(58.16)
(More) education	74	17	91
	(38.95)	(3.96)	(14.70)
(Another) apprenticeship	13	5	18
	(6.84)	(1.17)	(2.91)
Stay with patron	0	19	19
	(0.00)	(4.43)	(3.07)
Other	15	10	25
	(7.89)	(2.33)	(4.04)
Total	190	429	619
	(100.00)	(100.00)	(100.00)

(% in parentheses)

Source: authors' compilation based on data.

Table 7 also shows the activity youth currently in school expect to take up after graduation. The most popular choice, despite the relatively advanced age of the youth (average age: 22.7), is more education. Given the rising university enrollment rates in Sub-Saharan Africa, it is perhaps unsurprising that many secondary school students have college aspirations. More unexpected is the proportion of *university* students expecting to remain in the education system upon graduation. While this could indicate the desire to pursue graduate or post-graduate studies, it is also indicative of the weak labor market for university graduates. Unlike apprentices, youth with elevated school attainment are more likely to look for a wage job than to try and start a business of their own.

Table 8: Where do you see yourself in five years?

	NEET	Self-Employed	Wage Employed	Total
Still looking for work	8	–	–	8
	(2.92)			(1.29)
Same employer	–	–	20	20
			(10.99)	(3.22)
Different/new employer	58	43	47	148
	(21.17)	(26.06)	(25.82)	(23.83)
(Still) self-employed	191	103	91	385
	(69.71)	(62.42)	(50.00)	(62.00)
In education/training	11	3	16	30
	(4.01)	(1.82)	(8.79)	(4.83)
Other	6	16	8	30
	(2.19)	(9.70)	(4.40)	(4.83)
Total	274	165	182	621
	(100.00)	(100.00)	(100.00)	(100.00)

(% in parentheses)

Source: authors' compilation based on data.

Table 8 tabulates the responses of self-employed, wage employed, and NEET youth to the question, "What do you see yourself doing in five years?" More employed youth envision themselves starting their own business (91) than working for their current (20) or a different (47) employer combined. Recall that wage workers reported the lowest levels of satisfaction with their current activity (Table 6). This suggests that, despite its common characterization as the "ideal" employment situation, wage employment appears to be neither inherently stable nor particularly desired – at least in the early stages of a career. Self-employed workers are likely to see themselves as still self-employed in five years, though over a quarter expect to be working for an employer (hence switching to wage employment in

our categorization). Thus self-employment is not an end-goal for a substantial fraction of youth, but rather a stepping stone or temporary holdout on the route to wage employment.

When asked where they see themselves in 10 years, NEET youth were decidedly optimistic. Table 8 shows that less than 3% expected to still be searching for work and over 90% envisaged themselves working either for themselves or an employer. The majority (69.7%) of youth in this category saw themselves running their own business, which is higher than the rates seen among those in wage employment (50%), and even among the self-employed (62.4%). The rate of NEET youth who foresee themselves working in a wage job (21.2%) is almost double the actual wage-employed rate observed in the census (11.7%), despite having completed less schooling than wage-employed youth on average (Tables 3 and 4).

5 Subsample Analysis

5.1 Apprentices

Our paper adds to a recent surge in interest in informal apprenticeship in the economics literature (e.g. Alfonsi et al. (2019); Hardy, Mbiti, McCasland, and Salcher (2019)). Experimental work on apprenticeships in Ghana suggests that firms face high screening costs when hiring apprentices, but that high quality apprentices help firms expand (and increase profits) (Hardy et al. 2019). From the youth perspective, participation in a national apprenticeship program improved skills and increase the tendency to shift into self-employment. Alfonsi et al. (2019) find that apprenticeships in Uganda improve earnings and career progression, but less so than formal vocational training. A major focus of this survey was to collect more detailed information on the working conditions, costs, and career perspectives of apprentices, which have largely been missing from these otherwise ambitious studies.

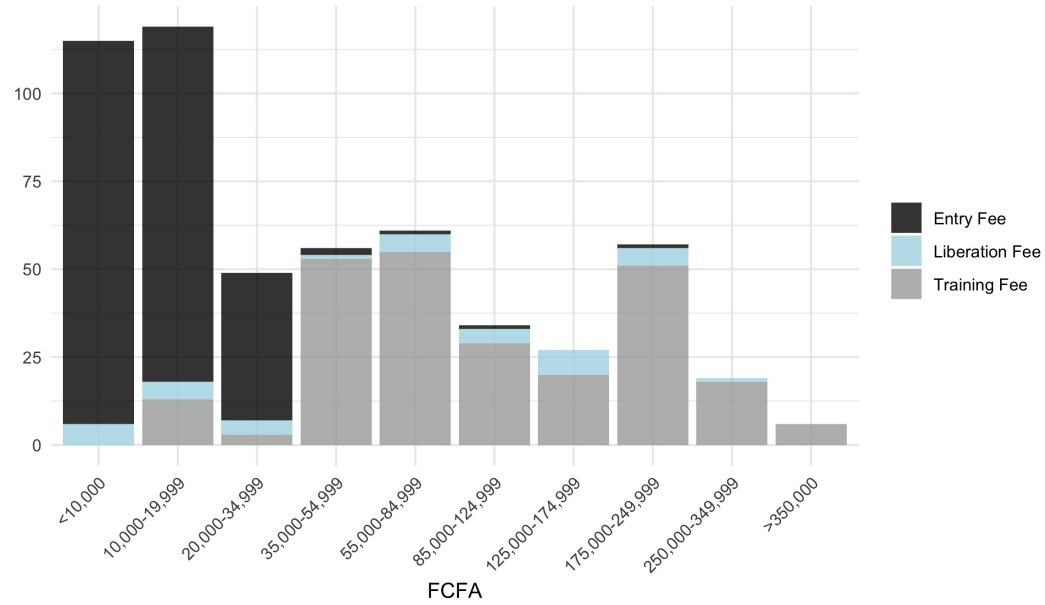
Apprentices in our sample reported working for firms employing, on average, 11.7 employees. Over half the firms were reported to have 8 or fewer employees, and 164 out of 265 training firms (61.8%) employ only apprentices. If such business are considered one-person enterprises, this figure is in line with the work of (Mead and Liedholm 1998), who found between 47% and 79% of IMEs, across six countries in SSA, to be one-person enterprises (and hired labor to represent less than 3% of the workforce).

The average firm employs 10.7 apprentices, suggesting that even businesses that hire waged personell depend predominantly on apprentice labor. Urban apprentices reported working an average of 4.1 days in the week previous to the survey, and roughly 7.6 hours on the last day that they worked. Apprentices that worked for at least one day worked an average of 5.3 days, while those who worked at least one hour in the previous day of work worked an average of 8.2 hours that day.

Apprentices constitute the primary labor force of the masters; thus, the cost of doing an apprenticeship has been going down steadily in recent years, with some masters even taking on apprentices for free if the parents are unable to pay. However, the costs of apprenticeship to the apprentice and their family are still significant. The majority of the costs are in the form of transfers to the master craftsman before, during, and at the completion of the apprenticeship in the form of various fees. We identified six of the most significant categories of the these fees: the entry, graduation (or *liberation*), training , contract signing, examination, and materials fees. Though once a widespread practice, the graduation fee was phased out with the national standardization of informal apprenticeship, and finally officially prohibited with the roll out of the *Certificat de Qualification aux Métiers* (CQM), in 2013. CQM certificates are recognized at the national level and recognize their holders as qualified craftsmen who are free to open and operate their own business. The prohibition of the graduation fee is reflected in the low number of apprentices (14.9%) reporting that they are due for a graduation fee upon finishing their

apprenticeship. In contrast, nearly two thirds of all apprentices are required to pay a training fee; 59.9% pay an entry fee, and 52.7% pay a fee to compensate their masters for their materials. Under a quarter pay a contract or an examination fee. Below, we break down the costs of each of these fees according to the apprentices.

Figure 4: Major Apprenticeship Fees



Source: authors' compilation based on data.

The liberation fee and the training fee are the two major costs borne by apprentices and their families, as shown in Figure 4. The median apprentice pays between 55,000 and 85,000 FCFA (92-142 CHF) for the training fee (*frais de formation*) and between 85,000 and 125,000 FCFA (142-209 CHF) for the graduation fee (*frais de liberation*). These fees are not negligible: consider that the median self-employed youth reported earning between 20,000 and 40,000 FCFA per month in revenues (Figure 7). The remaining fees are considerably lower when considered in isolation, but taken together also add up to considerable expenditures for apprentices. In particular, the median materials fee amounts to between 10,000 and 15,000 FCFA (17-25 CHF) for materials, and is required of almost half of all apprentices.

Finally, the survey included questions regarding the training of the apprentices itself. 104 apprentices (23.8%) had participated in training outside their workshop at some point in the preceding three months. For those apprentices who had attended training in the preceding 3 months, about 40% reported training "for about a month" in total. It is likely that these apprentices are enrolled in *Lycées Technique Industriel* (LTIs), or technical high schools, in which theoretical classroom teaching occurs for months at a time and is interspersed with traditional workplace-based training in a local workshop. Teachers from several LTIs had submitted applications for entire classes of students (unbeknownst to the surveying team), and it is likely that apprentices reporting having trained for over a month are enrolled in such schools, and thus attending classes for months at a time.

5.2 Youth in Education

About one quarter of the non-apprentice sample reported being in school at the time of the survey. Business and economics, agriculture, and the humanities are particularly popular subjects, accounting for 21.3%, 18.7%, and 17.3 of the sample, respectively. In contrast, only about 16% of respondents report studying natural sciences, mathematics, medicine or engineering (this rate is 39% among university stu-

dents in Switzerland). Motivating young African students to take up natural sciences and engineering appears to remains a challenge.

5.3 Working Youth

We now turn to the job characteristics of the 184 youth in wage employment. Youth included in this category reported either having worked at least one hour for an income in the past week or working for an employer as something other than an apprentice. Thus, inclusion in this category says nothing about the quality or formality of the job in question, especially since even wage jobs in low-income countries "can be informal, low-productivity, and low-pay" (Pieters 2013). In fact, the majority (56.2%) of the respondents in this category reported not having a contract, written or verbal, with their employer. Of the 43.81% of the youth with a contract, 55.3% had a written contract and 49.4% had a contract of unlimited duration. The tabulation of contract types along these two dimensions is shown in Table 9 below.

Table 9: Contract Type and Duration

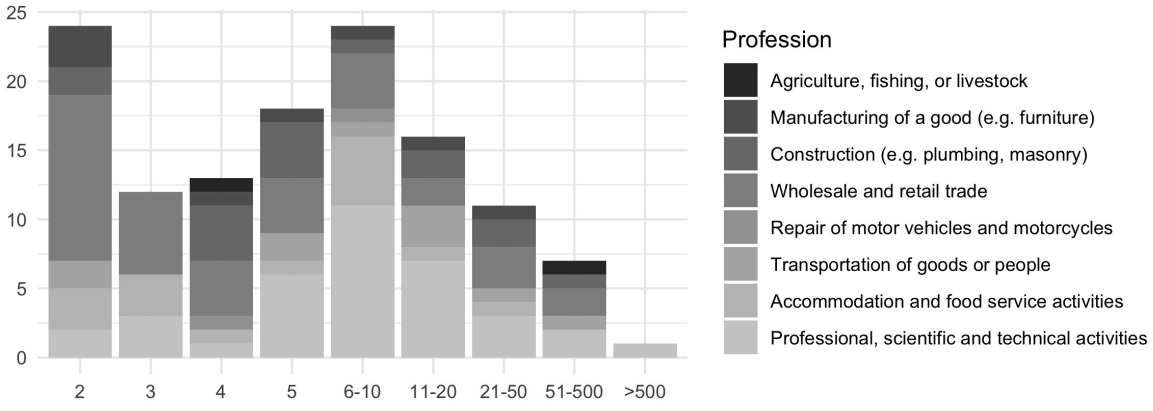
	Contract Duraction		
Contract Type	Limited	Unlimited	Total
Written contract	25	22	47
	(53.19)	(46.81)	(100.00)
Verbal contract	18	20	38
	(47.37)	(52.63)	(100.00)
Total	43	42	85
	(50.59)	(49.41)	(100.00)

(row % in parentheses)

Source: authors' compilation based on data.

Figure 5 shows the size distribution of these youths' employers. The most common are two-person firms (the respondent and their employer), followed by firms of between six and ten employees. Agriculture comprises an understandably small fraction of the sample considering the urban setting. Small employers are predominantly small-scale traders, while employers in the professional, scientific, and technical sector generally employ at least 4 workers.

Figure 5: Firm Size of Employers, by Profession



Source: authors' compilation based on data.

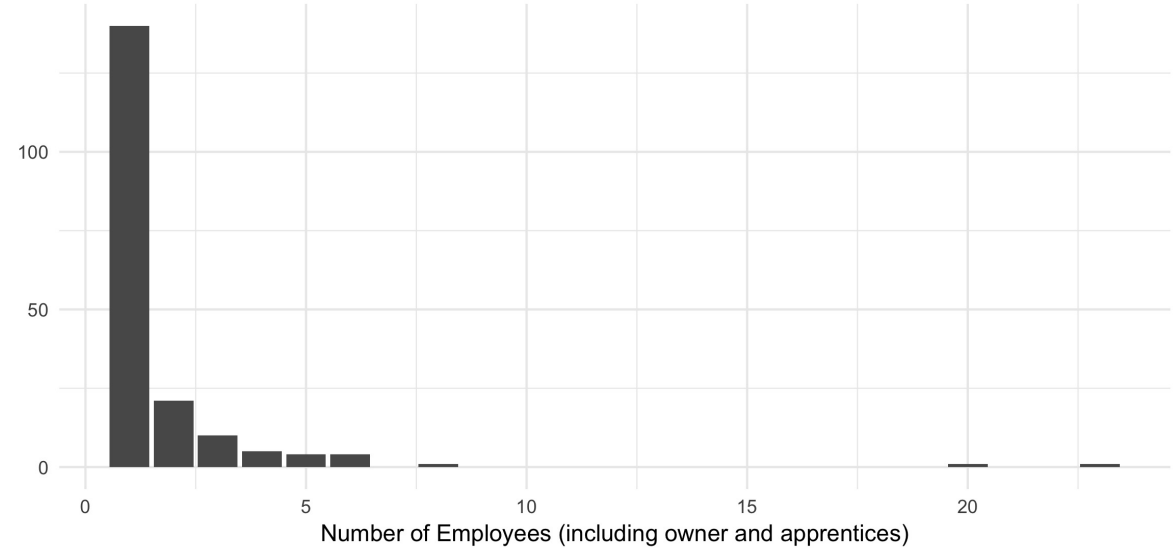
The average and median worker both report having worked 9 hours on their previous workday. We calculate the mean length of the workweek by multiplying the number of hours worked on the last workday by the number of days worked in the previous workweek. Among employees who reported working at least one hour (but less than 16 hours) on their last day of work, the mean workweek had 47.1 hours and the median workweek 48 hours. Some respondents report having worked the maximum

of 16 hours (or more) on their last day of work, and having worked all five days the week before the survey, which is likely to be intentional misreporting. For those receiving a monthly wage (the majority of respondents), 95% report making less than 100,000 FCFA a month (164 CHF). 41% report earning between 35,000 and 54,999 FCFA (between 57 and 90 CHF) per month, and over a quarter earn less than 34,999 FCFA.

5.4 Self-Employed Youth

In this section we turn our attention to the 174 self-employed youth who responded to our request for an interview (recall that this group had the highest refusal rate). The most common sector in the sample is wholesale and retail trade (35%), followed by services such as sewing and hairdressing (12.6%). In contrast to the training firms discussed in Section 5.1, firms owned by youth under 29 are considerably less likely to hire apprentices as labor. As shown in Figure 6, the firms of self-employed youth are skewed towards truly one-person enterprises: three-quarters of self-employed youth have no employees and only 12 firm owners report training any apprentices The mean firm size is just 1.75 total employees, including the owner.

Figure 6: Firm Size: Self-Employed



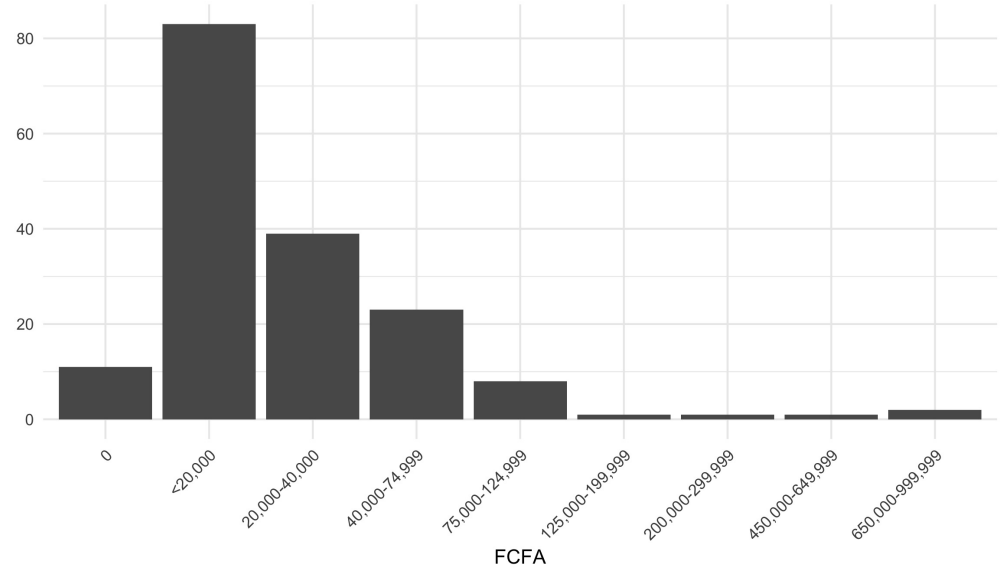
Source: authors' compilation based on data.

Three potential explanations arise for the disparity in firm size between training firms and those owned by self-employed youth. First, owners of training firms are considerably older, and hence more established, than the self-employed youth in our sample, and may simply be in a better position to hire apprentices given their experience, higher income, or reputation. Second, a firm training at least one apprentice is likely to have multiple apprentices, while, as we have seen, there is a minimal amount of non-apprentice labor being hired. Finally, as mentioned in Section 3.2, the surveying team experienced the highest rate of non-response from self-employed youth. This may have be due to fears that the survey was a government probe into informal (and thus illegal) firms, and may skew the reported firm size distribution towards smaller firms (as larger firms tend to attract the attention of the local tax authorities).

Profits of self-employed youth are shown in Figure 7. Self-employed youth were asked to estimate their profits after assessing their revenues, expenses, and wage bills for the previous month. By lowering the total mental recall effort, we hope to arrive at more precise estimates of firm profitability (Anderson, Christy Lazicky, and Bilal Zia 2019). The bins correspond to the answer choices presented to the respondent. This is a standard method when asking for high figures, in order to reduce both respondent

recall bias and data entry errors. The reported numbers indicate that profitability follows a similar pattern as profit, with a strong skew towards minimum amounts and a relatively long right tail. Over 90% of self-employed individuals report earning less than 75,000 FCFA (126 CHF) after all expenses. Over half of the sample (56%) reports earning less than 20,000 FCFA (CHF 33) per month, which is dangerously close to the poverty rate, at $3.2 per day in purchasing power parity terms (using the 2018 conversion factor).

Figure 7: Self-reported Monthly Profits: Self-employed



Source: authors' compilation based on data.

Finally, self-employed workers were asked to rank six challenges facing their businesses, from most pressing (1) to least pressing (6). Despite the commonly expressed frustration with inefficient bureaucracy and government interference, self-employed youth list this issue as their least pressing challenge. Instead, lack of access to financing and basic infrastructure like electricity, along with market competition, appear to be their primary concerns. Lack of access to finance is reflected in the very low rates of self-employed youth who use credit: only 32 firm owners reported having a bank account, and just eight firms out of 174 (4.6%) reported currently possessing any outstanding loans. This corresponds to the norm for SSA, where lack of financing constitutes one of the major obstacles to private sector growth (Aryeetey 1998; Abor and Biekpe 2006; Quartey, Turkson, Abor, and Iddrisu 2017).

Table 10: Obstacles Facing the Self-Employed

	Average Rank
Poor access to electricity	3.12
Competition	3.06
Poor access to credit	2.93
Lack of qualified labor	3.60
Lack of motivated apprentices	3.70
Government bureaucracy	4.59

Source: authors' compilation based on data.

5.5 Youth Not in Employment, Education, or Training (NEET)

Finally, we examine the summary statistics for the 274 surveyed youth who reported being neither in school, nor in a training program, nor working at least an hour per week. Two-thirds of youth who qualified for this category never having been employed, indicative of major difficulties to embark on a working career after exiting the education system. Nearly half had been out of work for over a year.

78% of the NEET sample responded that they were searching for a job. Of these, more than half had been looking for work for over six months. Inquiring through friends, relatives, or acquaintances are the most common way that youth look for employment, closely followed by responding to a job announcement. Not all youth show such initiative in their job search, however. Over a third of those looking for a job indicated that they had not taken any steps to find it.

Young job-seekers blame weak labor market demand and their own inadequate skills for their difficulties in securing employment. A shortage of employer demand and their own lack of work experience and training represent the most commonly listed difficulties: at least one of these being mentioned by 155 of 274 youth (56.6%) in the subsample. 8.8% said they didn't know where to look, while 7.3% cited unsatisfactory working conditions at the available jobs. Among those responding "Other", many elaborated on the above categories (*e.g., "No jobs in political science"*), pointed to their lack of means or connections, or were unable to identify any obstacles at all; three women listed maternity.

6 Follow-up Survey

The first round of the remote follow-up survey was conducted in November 2019. During the baseline survey, youth were asked to provide up to four personal phone numbers and the number of a friend or relative for the remote survey rounds. For the follow-up, surveyors were instructed to make at least five attempts at contacting each baseline respondent using on the numbers provided.

Table 11: Transition Matrix

	Follow-Up					
Baseline	School	NEET	Self	Wage	Apprentice	Total
School	108	29	12	10	6	165
	(65.45)	(17.58)	(7.27)	(6.06)	(3.64)	(100.00)
	[76.60]	[13.06]	[5.71]	[4.95]	[1.83]	[14.97]
NEET	14	114	48	46	10	232
	(6.03)	(49.14)	(20.69)	(19.83)	(4.31)	(100.00)
	[9.93]	[51.35]	[22.86]	[22.77]	[3.06]	[21.05]
Self-Employed	2	22	103	17	1	145
	(1.38)	(15.17)	(71.03)	(11.72)	(0.69)	(100.00)
	[1.42]	[9.91]	[49.05]	[8.42]	[0.31]	[13.16]
Wage Employed	13	26	21	103	4	167
	(7.78)	(15.57)	(12.57)	(61.68)	(2.40)	(100.00)
	[9.22]	[11.71]	[10.00]	[50.99]	[1.22]	[15.15]
Apprentice	4	31	26	26	306	393
	(1.02)	(7.89)	(6.62)	(6.62)	(77.86)	(100.00)
	[2.84]	[13.96]	[12.38]	[12.87]	[93.58]	[35.66]
Total	141	222	210	202	327	1102
	(12.79)	(20.15)	(19.06)	(18.33)	(29.67)	(100.00)
	[100.00]	[100.00]	[100.00]	[100.00]	[100.00]	[100.00]

(row % in parentheses)
[column % in brackets]

Source: authors' compilation based on data.

In total, 1102 of 1244 (88.6%) of urban youth were reached for the first round of the remote survey. Attrition does not differ markedly by activity. Table 11 shows the transition rates between activities in the approximately three months between the baseline and the first follow-up round. Youth who did not change activities are found in the diagonal of the transition matrix – remarkably, this only includes two thirds of the youth who responded to the request for a follow-up interview. The most stable activities are apprenticeships and self-employment, with 77.9% and 71.0% retention rates, respectively. 368 out of 1102 respondents (33.3%) report being in a different activity. The youth most likely to change activities between the two round were NEET youth, with only 49.1% of those reporting being NEET during

the baseline survey remained so three months later. The rate of self-employed youth grows the fastest between the two survey rounds (from 13.4% to 19.0%), while the number of apprentices sees the greatest reduction (from 34.5% to 29.7%).

A closer examination of the transitions confirms that youth are unlikely to start schooling or an apprenticeship after the age of 20. Moreover, transitions from NEET status to some form of employment are surprisingly common. Youth were most likely to transition *into* NEET, self-employment, or wage employment, with approximately half of the youth reporting these activities in the follow-up survey transitioning from a different main activity during the baseline. The most frequent transitions were from NEET into self-employment (48 youth total) and NEET into wage employment (46), followed by the transitions from apprenticeship to NEET (31), school to NEET (29), apprenticeship to self-employment (26), apprenticeship to wage employment (26), and wage employment to NEET.

7 Conclusions and Future Work

Upon closer inspection, two "tracks" for youth entering the work force materialize out of this survey data. Those with educated, well-off parents stay in school well into their twenties, then embark on a long search for wage employment. Those lucky enough to receive a job quickly become dissatisfied, and in most cases do not expect to retain their job for more than five years. Those less lucky search fruitlessly for years as NEET: neither in employment, education or training.

On the other hand, those who cannot afford long unemployment spells and over a decade of schooling opt for apprenticeship en route to self-employment, or enter self-employment directly upon graduation. Self-employed youth are are more likely to have moved out from their parents' home, to be married, and to start a family. While most report profits reflecting lives close to subsistence, under-reporting is possible if respondents suspect surveyors to be associated with tax officials.

The high response rate in the follow-up portion of the survey makes us optimistic about phone-based data collection as a tool for learning more about this demographic. Urban youth are an ideal subject for phone-based surveys due to their high literacy and relatively high phone ownership, as well as the better network coverage in cities relative to urban areas. On the balance, we agree that "the cost savings of a phone survey are substantial, as long as the questions of interest call for high frequency panel data" (Dillon 2012).

References

Abor, J., and Biekpe, N. (2006). 'Small Business Financing Initiatives in Ghana'. *Problems and Perspectives in Management*, *4*(3): .

Alfonsi, L., Bandiera, O., Bassi, V., Burgess, R., Rasul, I., Sulaiman, M., and Vitali, A. (2019). 'Tackling Youth Unemployment: Evidence from a Labor Market Experiment in Uganda'. PEDL Research Paper.

Anderson, S. J., Christy Lazicky, and Bilal Zia. (2019, April). 'Measuring the Unmeasured : Combining Technology and Behavioral Insights to Improve Measurement of Business Outcomes'. World Bank Policy Research Working Paper No. 8836.

Aryeetey, E. (1998). 'Informal Finance for Private Sector Development in Africa'. Tech. Rep.. African Development Bank.

Baah-Boateng, W. (2013, December). 'Determinants of Unemployment in Ghana: Determinants of Unemployment in Ghana'. *African Development Review*, *25*(4): 385–399. doi: 10.1111/1467-8268.12037

Ballivian, A., Azevedo, J. P., and Durbin, W. (2015, September). 'Using Mobile Phones for High-Frequency Data Collection'. In *Mobile Research Methods: Opportunities and challenges of mobile research methodologies.* Ubiquity Press. doi: 10.5334/bar.c

Barro, R. J., and Lee, J. W. (2013, September). 'A new data set of educational attainment in the world, 1950–2010'. *Journal of Development Economics*, *104*(): 184–198. doi: 10.1016/j.jdeveco.2012.10.001

Culpepper, P. D. (2001). 'Employers, Public Policy, and the Politics of Decentralized Cooperation in Germany and France'. In P. A. Hall and D. Soskice (eds), *Varieties of Capitalism.* Oxford University Press. doi: 10.1093/0199247757.001.0001

Deaton, A. (1997). *The analysis of household surveys: A microeconometric approach to development policy*. Baltimore, Maryland: The World Bank. doi: 10.1596/0-8018-5254-4

Demombynes, G., Gubbins, P., and Romeo, A. (2013, January). 'Challenges and Opportunities of Mobile Phone-Based Data Collection: Evidence from South Sudan'. World Bank Policy Research Working Paper No. 6321. doi: 10.1596/1813-9450-6321

Dillon, B. (2012, May). 'Using mobile phones to collect panel data in developing countries'. *Journal of International Development*, *24*(4): 518–527. doi: 10.1002/jid.1771

Etang-Ndip, A., Hoogeveen, J., and Lendorfer, J. (2015, May). 'Socioeconomic Impact of the Crisis in North Mali on Displaced People'. World Bank Policy Research Working Paper No. 7253. The World Bank. doi: 10.1596/1813-9450-7253

Falco, P., Maloney, W. F., Rijkers, B., and Sarrias, M. (2015, March). 'Heterogeneity in subjective wellbeing: An application to occupational allocation in Africa'. *Journal of Economic Behavior & Organization*, *111*(): 137–153. doi: 10.1016/j.jebo.2014.12.022

Filmer, D., and Fox, L. (2014). *Youth Employment in Sub-Saharan Africa*. The World Bank. doi: 10.1596/978-1-4648-0107-5

Garlick, R., Orkin, K., and Quinn, S. (2019, November). 'Call Me Maybe: Experimental Evidence on Frequency and Medium Effects in Microenterprise Surveys'. *The World Bank Economic Review*, *00*(0): . doi: 10.1093/wber/lhz021

Haan, H. C. (2006). *Training for Work in the Informal Micro-Enterprise Sector: Fresh Evidence from Sub-Sahara Africa*. Springer Netherlands. doi: 10.1007/1-4020-3828-3

Hardy, M., Mbiti, I., McCasland, J., and Salcher, I. (2019, May). 'The Apprenticeship-to-Work Transition: Experimental Evidence from Ghana'. World Bank Policy Research Working Paper No. 8851.

Hoogeveen, J., Croke, K., Dabalen, A., Demombynes, G., and Giugale, M. (2014, January). 'Collecting high frequency panel data in Africa using mobile phone interviews'. *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, *35*(1): 186–207. doi: 10.1080/02255189.2014.876390

Lau, C., Gachugu, E., Johnson, E., and Marks, L. (2018, May). 'Using SMS Technology to Survey Low-Income Youth: Lessons from a Vocational Education Tracking Study in Kenya: SMS for Graduate Surveys'. *Journal of International Development*, *30*(6): 1060–1063. doi: 10.1002/jid.3373

Leidich, A., Achiro, L., Kwena, Z. A., McFarland, W., Neilands, T. B., Cohen, C. R., Bukusi, E. A., and Camlin, C. S. (2018, January). 'Methods for sampling geographically mobile female traders in an East African market setting'. *PLOS ONE*, *13*(1): . doi: 10.1371/journal.pone.0190395

Mead, D. C., and Liedholm, C. (1998, January). 'The dynamics of micro and small enterprises in developing countries'. *World Development*, *26*(1): 61–74. doi: 10.1016/S0305-750X(97)10010-9

Nordman, C. J., and Pasquier-Doumer, L. (2014, September). 'Vocational education, on-the-job training, and labour market integration of young workers in urban West Africa'. *PROSPECTS*, *44*(3): 445–462. doi: 10.1007/s11125-014-9320-3

Pasquier-Doumer, L. (2013, January). 'Intergenerational Transmission of Self-Employed Status in the Informal Sector: A Constrained Choice or Better Income Prospects? Evidence from Seven West African Countries'. *Journal of African Economies*, *22*(1): 73–111. doi: 10.1093/jae/ejs017

Peet, E. D., Fink, G., and Fawzi, W. (2015, December). 'Returns to education in developing countries: Evidence from the living standards and measurement study surveys'. *Economics of Education Review*, *49*(): 69–90. doi: 10.1016/j.econedurev.2015.08.002

Pieters, J. (2013). 'Youth Employment in Developing Countries'. IZA Research Report No. 58.

Psacharopoulos, G., and Patrinos, H. A. (2004, August). 'Returns to investment in education: A further update'. *Education Economics*, *12*(2): 111–134. doi: 10.1080/0964529042000239140

Quartey, P., Turkson, E., Abor, J. Y., and Iddrisu, A. M. (2017, June). 'Financing the growth of SMEs in Africa: What are the contraints to SME financing within ECOWAS?' *Review of Development Finance*, *7*(1): 18–28. doi: 10.1016/j.rdf.2017.03.001

Shehu, E., and Nilsson, B. (2014, February). 'Informal employment among youth: Evidence from 20 school-to-work transition surveys'. Work4Youth Publication Series No. 8. Geneva: International Labour Office.

World Bank. (2017). *World Development Report 2018: Learning to Realize Education's Promise*. The World Bank. doi: 10.1596/978-1-4648-1096-1