

The Jobs that Youth Want and the Support They Need to Get Them:

Evidence from a Discrete Choice Experiment in Kenya

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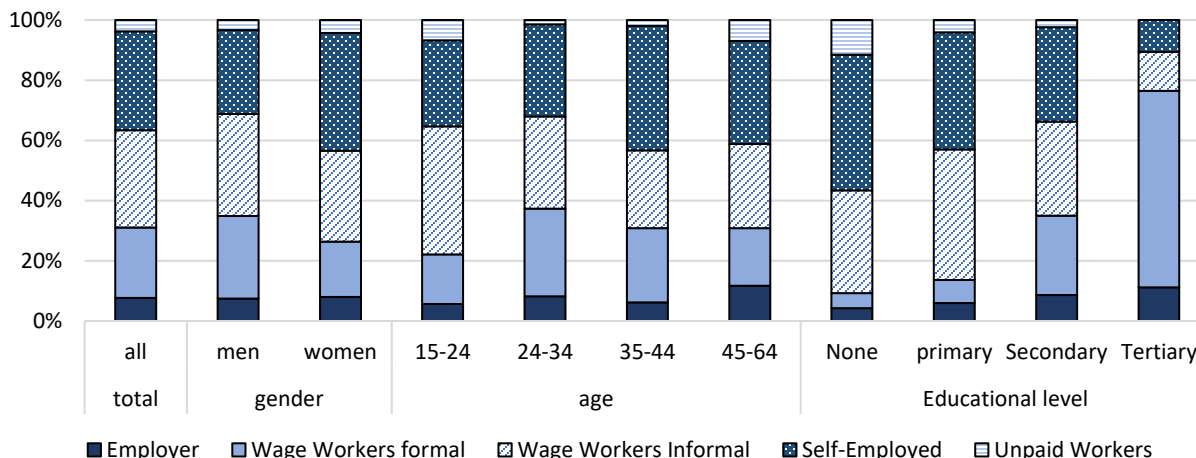
Abstract. *This paper presents the main results of three Discrete Choice Experiments designed to estimate youth preferences for different jobs attributes, and their willingness to pay for support services to access wage or self-employment. The experiments took place in urban areas in Kenya. We find that youth, in general, prefer to work in jobs that have the attributes of formal employment regardless of the tasks involved. Thus, they value stability, access to social insurance (in particular health insurance), and adequate working conditions. They do not have well defined preferences though between analytical vs. manual repetitive tasks or tasks that involve interpersonal/organizational skills or creativity. The main services youth demand to facilitate access to wage employment include jobs search assistance and training on soft-skills, followed by OJT and wage subsidies; they are not interested in technical training. For self-employment, they mainly seek support accessing credit, inputs and equipment, and insurance. Their willingness to pay for these services is modest relative to the average per capita cost of ALMPs, but it represents a substantial share of the payments made to youth and employers who participate in these programs.*

I. Introduction

As in several African countries, youth employment is one of the main development challenges facing Kenya. The economy has been creating jobs in line with economic growth, it has not been able to absorb many of the new entrants. It is estimated that the unemployment rates of those living in urban areas and aged between 15-19, 20-24 and 25-34 are 32 percent, 30 percent and 18 percent respectively, compared to only 4 percent of those aged between 55 and 64.¹ Another 30 percent of those living in urban areas and aged between 15 and 34 are idle; not working, looking for jobs, or studying. Finally, among youth aged 15-24 living in urban areas who work, the majority are employed in the informal sector; informal wage employed (43 percent), self-employed (29 percent) and unpaid worker (7 percent) (see Figure 1).

¹ Sanchez Puerta, M.L. and Perinet, M. (2015). *Kenya Skills Towards Employability and Productivity (STEP) Survey Findings*.

Figure 1: Disaggregation of employment by type of workers



Source: World Bank 2013 Kenya Skills Towards Employability and Productivity (STEP) Household Survey

As a response, the government has implemented a series of Active Labor Market Programs (ALMPs) to help young people access wage or self-employment. One of them is the Kenya Youth Empowerment Program (KYEP) that targets vulnerable youth (i.e. at risk of longer-term unemployment or of becoming stuck in low-productivity jobs) aged 15-29 years old. Beneficiaries are expected to have a minimum of eight years of schooling, to have been out of school for at least one year and to be unemployed. The project operates in Nairobi, Mombasa and Kisumu. It offers three months of training combined with three months of work experience. Once the training is completed, youth are placed on a 12-week internship in a private sector firm expected to provide on-the-job training and mentorship. During the internship period, youth received a stipend of KSh 6,000 and employers received KSh 3,000, equivalent to US\$59.2 and US\$29.6 respectively.

Evidence from different impact evaluations around the world, however, shows that youth employment programs have had limited success. From around 90 programs with rigorous impact evaluations, only a third had statistically significant impacts on employment and earnings.² For the large majority of public ALMP, there are no evaluations and therefore it is unclear whether the programs are achieving the objectives for which they were designed.

One of the factors contributing the poor performance of the ALMP programs is the lack of understanding of youth preferences for different types of jobs and the types of constraints they face to access these jobs. Indeed, the results from the evaluation [Kluve et al., 2016] suggests that successful programs are better at adapting/responding to the needs of a heterogenous group of beneficiaries. They do this by setting up profiling systems³, offering a comprehensive set of services, and by having in place adequate monitoring & evaluation systems. A better understanding

² Kluve, J, Puerto, S, Robalino, D, Romero, J.R, Rother, F, Stöterau, J, Weidenkaff, F, Witte, W. (2016). *Do Youth Employment Programs Improve Labor Market Outcomes? A Systematic Review*. IZA DP No. 10263

³ Profiling is the identification of individual factors and challenges that represent a risk in the labor market (e.g. of becoming long term unemployment). Based on those profiles, appropriate employment services will be assigned.

of the types of jobs that youth want, the type of support they need, and their willingness to pay for the services they receive can help to improve the design of ALMPs.

This paper presents the results of discrete choice experiments (DCEs) with a sample of Beneficiaries of the KYEP project, aimed at assessing youth preferences for different jobs attributes as well as their willingness to pay for different types of services that would facilitate their access to wage or self-employment. DCEs try to reconstruct individual preferences on the basis of hypothetical choices that mimic “revealed” preferences. There are three advantages of DCEs with respect to other techniques to identify preferences: i) they control for the influence of confounding factors; ii) they offer quantitative measures for the relative importance of different job attributes, including the willingness to pay and demand elasticities relating to these attributes; and iii) they can be used to assess the impact of changes in job attributes or services.

The results of the experiment indicate that youth prefer formal jobs regardless of the tasks involved and are willing to accept lower wages to access them. Both men and women favor jobs that offer stability, access to social insurance, and adequate working conditions. Access to social insurance, especially health insurance, is the most important attribute in a job. Youth, actually, seem to be indifferent to the tasks involved in the job. There are no clear preferences, for instance, for analytical versus repetitive manual tasks, or between organization and management activities and the provision of social services.

Youth have well defined preferences regarding the types of support services they would like to receive to access wage or self-employment opportunities. For wage employment, the most valued services seem to be job search assistance and training in soft-skills, followed by wage subsidies and on-the-job training. There is little demand for counseling or technical training. When it comes to support for accessing self-employment, the difference in the willingness to pay for different types of services is less pronounced. The main priority is support to access credit, followed by purchase of equipment and inputs, access to insurance, and training in business management. In general, the reported willingness to pay for the services is small relative to the actual cost of the programs. As an illustration, if comprehensive ALMPs costs between USD 500 and 3,000 per capita, youth would be willing to contribute on average USD 40, or between 1 percent and 8 percent of total costs. Their contribution, however, would represent around half of the total transfer made to youth and employers who participate in the program (USD 90 in the case of the KYEP).

The remainder of this paper is organized in six sections. Sections 2 and 3 describe the survey and experimental design and the analytical methods used to estimate preferences for different jobs attributes and the willingness to pay for different types of services. Sections 4, and 5 summarize the results from three DCEs: jobs preference, support for wage employment, and support for self-employment. The final session summarizes the main insights and policy implications of the research.

II. Discrete Choice Experiments (DCE)

A Discrete Choice Experiment (DCE), is a quantitative technique to better understand the preferences of individuals about specific choices. It can provide useful inputs for policy making and has been applied in such diverse fields as product development, marketing, transportation

modeling, health policies, or the provision of government services. In the absence of data on actual or revealed preferences, the technique asks individuals to state their preferences over hypothetical alternative scenarios, goods or services. Specifically, DCEs present individuals with a number of competing alternatives that the individuals are (repeatedly) requested to choose from ('choice task'). Each alternative is defined by a set of common attributes that feature varying attribute levels. For example, alternative jobs can be defined by common attributes such as: (i) wages, (ii) working hours, and (iii) types of tasks/activities. The individual decision-maker is required to indicate the preferred alternative in a sequence of choice tasks. The attributes of the alternatives are systematically varied across choice tasks, using an experimental design, which allows for the determination of how each of the attributes impacts on the preferences of the sampled population.

In the case of Kenya, the overall survey consisted of three distinct DCEs. DCE 1 was aimed at studying preferences for different job attributes; DCE 2 was designed to study preferences for services to connect youth to self-employment; and DCE 3 was designed to study preferences for services to connect youth to wage-employment. For each DCE there were different versions of the survey as a result of the specific design employed. Specifically, there were 18, 6 and 9 different versions of DCEs 1, 2 and 3 respectively and a total of 33 unique versions of the overall survey. At the beginning of the survey, the respondents were randomized to answer to one of these versions. Consequently, each respondent answered only one version (and therefore only one DCE). The survey also featured a common socio-demographic section at the end.

Preference for job attributes (DCE1). Eleven job attributes (characteristics) were systematically varied. The attributes and their levels are detailed below. There were a total of 18 different versions of DCE 1 assigned randomly to respondents. Each respondent answered only one version. Each version consisted of 20 choice tasks with three alternatives per choice task. Of the 20 choice tasks in each version 12 were common to all versions and 8 varied from version to version (see Table 1 below and Figure A.1 in the Annex). Respondents were asked to make a choice of their most and least preferred job in each choice task and whether they would accept the job if it was offered. A glossary and explanation of the type of skills was also provided to the respondents.

Table 1: DCE 1 attributes and levels

Attributes	Levels
Monthly Earnings for a 40 hr week	Ksh 8,000 Ksh 15,000 Ksh 24,000
Public/private/NGO sector	Public sector job Private sector job Non profit organization (NGO)
Earnings stability	Earnings as mentioned above but can be adjusted upwards/downwards based on profits and/or performance Fixed earnings but contract can end at any time Fixed earnings for a given period of time Fixed earnings as mentioned above
Working hours	60h per week 40h per week 20h per week
Vacation	No Yes
Flexible schedule	No Yes
Pension	No 10% of earnings gets pension of 40% of wages at age 65 20% of earnings gets pension of 65% of wages at age 65
Health Insurance	No Ksh 800 per month Basic coverage (only 50% of total health expenses, including drugs are covered) Ksh 1,600 per month Extended coverage (90% of total health expenses, including drugs, are covered)
Unemployment benefits	No 2% of wage, gets 50% of wage for 3 months 4% of wage, gets 80% of wage for 3 months
Commute time	More than 2h in traffic Between 1h and 2h in traffic Less than 1h in traffic
Type of skills required	Analytical Interpersonal Organization and control Repetitive manual Creative manual Social services and care

Preferences for services to connect to self-employment (DCE2). In this survey, respondents were asked to compare two hypothetical government packages to support youth to become self-employed. Each package comprised nine different attributes (characteristics) that were

systematically varied. The attributes and their levels are detailed below. There were a total of 6 different versions of DCE 2 assigned randomly to respondents. Each respondent answered to one version only. Each version consisted of 20 choice tasks with two alternatives per choice task. Of the 20 choice tasks in each version 12 were common to all versions and 8 varied from version to version (see Table 2 below and Figure A.2 in the Annex). Respondents were asked to make a choice of their most preferred package and whether they would consider acquiring any of the offered packages. More information about the attributes and an explanation was provided in a glossary.

Table 2: DCE 2 attributes and levels

Attributes	Levels
Helping you access credit	No Yes
Helping you access equipment/inputs	No Yes
Helping you access insurance	No Yes
Training in business management	No Yes
Training in finance	No Yes
Advisory services	No Yes
Services to connect to new clients/customers	No Yes
Service provider	Public provider / Government Private provider
Your costs (one-time payment)	Ksh 15,000 Ksh 7,500 Ksh 2,500 Ksh 0

Preference for services to connect to wage-employment. In this survey, respondents were asked to compare three hypothetical employment packages to support youth in accessing wage employment. The packages each comprised eight different attributes (characteristics) that were systematically varied. The attributes and their levels are detailed below. There were a total of 9 different versions of DCE 3 assigned randomly to respondents. Each respondent answered to one

version only. Each version consisted of 21 choice tasks with three alternatives per choice task. Of the 21 choice tasks in each version 12 were common to all versions and 9 varied from version to version (see Table 3 below and Figure A.3 in the Annex). Respondents were asked to make a choice of their most and least preferred job in each choice task and whether they would consider acquiring any of the packages on offer. More information about the attributes and an explanation was provided in a glossary.

Table 3: DCE 3 attributes and levels

Attributes	Levels
Counselling	Aptitude test Group counselling Face to face meetings
Technical training	60-100 hours in 2-4 months 150-200 hours in 6 months 300-450 hours in 9 months
Training to improve behaviors	Nothing Job interview and communications techniques Personal presentation, attitudes, and interactions with others
Wage Subsidies	Nothing between 20 and 50% more than 50%
Job search assistance	None Information about jobs in a center or through a computer You receive messages about job opportunities to your cell phone You have a person that give you advice on how to search for a job, helps with your CV, and suggests places to go
Internships/on the job training	6 months 12 months 24 months
Service provider of all services EXCEPT wage subsidies	Public provider / Government Private provider
Your costs (one-time payment)	Ksh 15,000 Ksh 10,000 Ksh 7,5000 Ksh 5,000 Ksh 2,500 Ksh 0

Implementation arrangements and sample description. The survey was conducted in 2015, capitalizing on the implementation of training sessions targeted to youth beneficiaries of the Kenya

Youth Empowerment Program (KYEP) mentioned above. KYEP provided training for almost 3,000 youth in three different training centers: (i) KEMU: 25 classes; (ii) PUEA: 12 classes; and (iii) VIP: 17 classes. Training on the survey was conducted for 54 class representatives, one for each class. The objectives of the training were: (i) explain the rationale and objectives of the survey; (ii) explain how to fill out the survey; and (iii) go over the different characteristics and attributes of the survey to ensure each term was well-understood. The 1-hour in-class training was combined with a hands-on training during which the class representatives filled out the survey and requested clarifications on methodology or terms unclear to them. The class representatives were then given the responsibility to deliver the one-hour in-class training to their respective classes and were provided an incentive of Khs 400 each (about USD 4.4). Youth who completed the survey received an in-kind incentive in the form of “air-time” (cell phone credits) worth Khs 500 (about USD 5.5). The respondents were invited to complete the survey on computers set up in the training rooms. A small pilot was conducted prior to launching the main surveys. The tables below contain the main demographics characteristics of the sample.

A minimum of 50 completed questionnaires were required for each version of the DCE to have sufficient observations for analysis. Given that DCE1 had the highest number of versions (18 different versions), it required at least 900 respondents (a total of 1,003 replies were actually completed in the survey). DCE2 (with 6 different version) and DCE3 (with 9 versions) required at least 300 (335 actual completed replies) and 450 (496 actual completed replies) completed questionnaires, respectively. DCE3 took the longest to complete at 31 minutes, on average, while DCE 2 took the shortest at 22 minutes.

There are no significant differences in the socio-demographic background of respondents across the three DCEs. Respondents across all DCEs had similar profiles: aged on average 24 years old, slightly more male respondents, almost two thirds had tertiary level education, a significant majority did not have any children, two thirds are unemployed while 12 percent are students and another 10 percent are self-employed, 4 out of 5 respondents lived in a household in which the total income was less than 50,000 Khs per month (~492 USD) and, two out of three prefer to be self-employed.

	DCE1		DCE2		DCE3	
Sample size	1003		335		496	
Versions	18		6		9	
Respondents per version	55.7		55.8		55.1	
	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>
Duration	27.0	22.0	22.0	27.0	31.0	26.3
Age (average)	24.0	24.0	24.0	24.0	24.0	24.0
People per household	5.0	5.0	5.0	5.0	4.0	4.0

Figure 2: Sample demographics

		DCE1	DCE2	DCE3
Gender	Male	56.0%	52.5%	54.8%
	Female	44.0%	47.5%	45.2%
Education	Primary	7.3%	7.2%	8.4%
	Secondary	34.6%	36.7%	33.86%
	Tertiary	58.1%	56.1%	61.1%

Children	Yes	16.1%	15.5%	15.7%
	No	84.0%	84.5%	84.3%
Current Employment Status	Employer	1.1%	0.3%	0.8%
	Self-employed (no employees)	9.2%	10.5%	9.7%
	Wage employee	3.8%	3.6%	3.0%
	Unemployed (seeking work)	59.7%	60.0%	59.7%
	Seeking for work for the first time	8.6%	8.4%	8.7%
	Student and not employed/ working	11.5%	11.9%	11.7%
	Student and employed/ working	1.7%	1.5%	1.6%
	Unpaid family worker	0.7%	0.3%	0.8%
	Unpaid trainee	3.2%	2.7%	2.8%
	Housewife	0.5%	0.6%	0.8%
	Doesn't want to work	0.1%	0.3%	0.4%
Average monthly HH income	Less than Khs 7,500	16.3%	16.1%	17.8%
	Khs 7,500- Khs 10,000	19.1%	14.3%	17.1%
	Khs 10,000- Khs 15,000	13.9%	18.8%	13.3%
	Khs 15,000- Khs 25,000	16.9%	16.1%	20.4%
	Khs 25,000- Khs 50,000	16.6%	17.0%	14.3%
	Khs 50,000- Khs 100,000	6.5%	9.0%	4.6%
	More than Khs 100,000	2.8%	3.6%	3.4%
	I don't know	8.1%	5.1%	9.1%
Job preference	Own account	69.9%	72.5%	69.0%
	Employee	30.1%	27.5%	31.1%
County of Origin	Nairobi	21.0%	18.9%	20.2%
	Kiambu	9.4%	10.7%	10.2%
	Kakamega	6.2%	4.9%	4.3%
	Murang'a	4.0%	6.1%	3.9%
	Kisii	3.7%	4.6%	5.3%
	Kisumu	4.6%	3.1%	5.7%
	Siaya	4.7%	4.0%	4.3%
	Machakos	3.8%	5.2%	2.9%
	Homa	3.3%	3.7%	3.5%
	Nyeri	2.2%	3.1%	4.1%
	Other (32 counties)	37.0%	35.9%	35.8%

III. Estimating preferences and willingness to pay

Discrete Choice Theory has a long history with origins in psychology with the work of Thurstone (1927) later developed by Luce (1959). They were introduced in economics by Marschak (1960) and developed into their current econometric implementation by McFadden (1973). It is assumed that the decision rule used for decision making is utility maximization.

Decision maker n chooses alternative i in a given set of alternatives $A(n)$, which provides a utility of U_{in} , if and only if it provides and higher utility than all the rest in the set.

$$U_{in} \geq U_{jn}, \forall j \neq i, (i, j) \in A(n).$$

U_{in} can be further decomposed into the sum of an observable component⁴, V_{in} , expressed as a function of the attributes, and a random or unexplained component, ε_{in} . It is assumed that the existence of this error term results either from the analyst being unable to observe the true choice processes of the individual respondents being modelled (see McFadden 1973 and Manski 1977) or, from a psychological perspective, the error term may also represent errors of the decision makers themselves. Due to the presence of a random term in the utility function this decision theory is often termed Random utility theory (RUT).

The equation below makes this decomposition explicit:

$$U_{in} = V_{in} + \varepsilon_{in}.$$

The systematic component of utility V_{in} is modeled as a linear index comprising a vector of observable aspects x_{in} (of the alternatives and possibly interactions of these with decision-makers characteristics) and coefficients β reflecting the weight given to each particular observed aspect. V_{in} can then be expressed as:

$$V_{in} = \sum_k x_{in}^k \beta_k$$

The probability of choosing alternative i from a set $A(n)$ can then be written as:

$$P_{in} = Prob\{\varepsilon_{jn} = \varepsilon_{in} + V_{in} - V_{jn}, \forall j \neq i, (i, j) \in A(n)\}.$$

The benchmark discrete choice model is the Multinomial Logit model (MNL). This is obtained from the above with the following added assumptions: 1) errors are independent and identically distributed (IID); 2) The distribution of ε_{in} is Extreme Value Type I; 3) Independence of observed choices; and 4) homogeneity of preferences (however interaction with observed covariates is possible and relaxes this assumption).

Given these assumptions the probability of choice simplifies to:

$$P_{in} = \frac{e^{V_{in}}}{\sum_j e^{V_{jn}}}.$$

The vector β representing the “weights” given by the individual to the different attributes can be estimated by a Maximum Likelihood Estimator.

To estimate the willingness to pay for different attributes we proceed as follows. Based on the estimates $\hat{\beta}_1, \hat{\beta}_2$, for two given attributes of a choice set (e.g., a type of job or a given package of support services) we calculate the following utilities:

$$V_a = V(0,0, \tilde{C}) = -\hat{\alpha} \tilde{C}$$

⁴ Otherwise referred to as the systematic component.

$$\begin{aligned} V_b &= V(1,0, \tilde{C}) = \hat{\beta}_1 - \hat{\alpha}\tilde{C} \\ V_c &= V(0,1, \tilde{C}) = \hat{\beta}_2 - \hat{\alpha}\tilde{C} \end{aligned}$$

where $\hat{\alpha}$ and \tilde{C} are the estimates of the cost impact on utility (or utility derived from earnings in the case of the jobs DCE). The difference in utility between two choice sets – other things being equal – are given by:

$$V_b - V_a = \hat{\beta}_1$$

This value has no specific unit so it can only be interpreted in comparison with the difference in utility from going from a to c which is

$$V_c - V_a = \hat{\beta}_2$$

If $\hat{\beta}_1 > 0$ we can say that b is preferred to a. If $\hat{\beta}_1 < \hat{\beta}_2$ we can say that moving from a to c is better than moving from a to b, and so on.

We can also ask the question of how much respondents are willing to pay to move from a product with $(X_1, X_2) = (0,0)$ to a product with $(X_1, X_2) = (1,0)$. Let this value be ΔC . They must be indifferent between the two products so we must have that

$$\begin{aligned} V(0,0, \tilde{C}) &= V(1,0, \tilde{C} + \Delta C) \\ -\hat{\alpha}\tilde{C} &= \hat{\beta}_1 - \hat{\alpha}(\tilde{C} + \Delta C) \end{aligned}$$

So the Willingness to Pay (WTPs) for individual attributes is given by:

$$\Delta C = \frac{\hat{\beta}_1}{\hat{\alpha}}$$

IV. DCE1: Jobs Preferences

The main results are presented in Table 4 and Table 9 below. These tables present, respectively, Multinomial Logit (MLN) and WTP estimates using as numeraire both monthly and hourly earnings. Table 6 and Table 7 disaggregate WTP estimates by gender although, for most attributes, differences are not statistically significant. Overall, the results suggest that young people in Kenya, beneficiaries of the KYEP, prefer jobs that offer stability, access to social insurance, and good working conditions. There is a slight bias against jobs in the private sector. In general, women seem to be more risk averse and are more likely to value pensions. Below we summarize the main insights for each of the jobs attributes.

Table 4: DCE1 Multinomial Logit (MNL) results

			MNL I			MNL II		
Attributes			Coef.	Std. Err.	P>z	Coef.	Std. Err.	P>z
	Outside option	d0	0.151	0.085	0.076	-0.146	0.081	0.072
	Monthly earnings	earnings	0.056	0.001	0.000			
	Hourly earnings	hearn				0.011	0.000	0.000
Sector	Public	att2_L1	0.000			0.000		
	Private	att2_L2	-0.073	0.032	0.024	-0.046	0.033	0.162
	NGO	att2_L3	0.095	0.033	0.004	0.089	0.033	0.008
Stability	Earnings are profit dependent	att3_L1	0.000			0.000		
	Fixed earnings but contract can end at any time	att3_L2	-0.378	0.037	0.000	-0.395	0.038	0.000
	Fixed earnings for a given period of time	att3_L3	-0.074	0.036	0.042	-0.088	0.036	0.016
	Fixed earnings	att3_L4	-0.154	0.037	0.000	-0.134	0.037	0.000
Working hours	60 h per week	att4_L1	0.000			0.000		
	40 h per week	att4_L2	-0.055	0.024	0.022	-0.584	0.020	0.000
	20 h per week	att4_L3	0.091	0.048	0.057	-0.903	0.041	0.000
Vacation	No	att5_L1	0.000			0.000		
	Yes	att5_L2	0.176	0.019	0.000	0.149	0.019	0.000
Flexible schedule	No	att6_L1	0.000			0.000		
	Yes	att6_L2	0.190	0.018	0.000	0.210	0.018	0.000
Pension	No	att7_L1	0.000			0.000		
	10% of earnings/ 40% of wages at age 65	att7_L2	0.342	0.020	0.000	0.312	0.020	0.000
	20% of earnings/ 65% of wages at age 65	att7_L3	0.351	0.033	0.000	0.364	0.033	0.000
Health insurance	No	att8_L1	0.000			0.000		
	Ksh 800 per month Basic coverage	att8_L2	0.447	0.032	0.000	0.458	0.032	0.000
	Ksh 1600 per month Extended coverage	att8_L3	0.456	0.019	0.000	0.483	0.019	0.000
Unemployment benefits	No	att9_L1	0.000			0.000		
	2% of wage, gets 50% of wage for 3 months	att9_L2	0.152	0.033	0.000	0.145	0.033	0.000
	4% of wage, gets 80% of wage for 3 months	att9_L3	0.245	0.019	0.000	0.212	0.019	0.000
Commute	More than 2h in traffic	att10_L1	0.000			0.000		
	Between 1h and 2h in traffic	att10_L2	0.118	0.033	0.000	0.114	0.033	0.000
	Less than 1h in traffic	att10_L3	0.162	0.032	0.000	0.168	0.032	0.000
Skills	Analytical	att11_L1	0.000			0.000		
	Interpersonal	att11_L2	0.026	0.050	0.606	0.040	0.050	0.430
	Organization and control	att11_L3	0.061	0.053	0.254	0.083	0.053	0.118
	Repetitive manual	att11_L4	-0.048	0.055	0.379	-0.012	0.055	0.834
	Creative manual	att11_L5	-0.009	0.045	0.839	0.011	0.045	0.801
	Social services	att11_L6	0.067	0.045	0.137	0.073	0.045	0.104
	LL		-22312			-22317		
	N		79200			79200		

Table 5: DCE1 WTP results

Attributes			Monthly earnings			Hourly earnings		
			Coef.	Std. Err.	P>z	Coef.	Std. Err.	P>z
	Outside option	d0	2709	1491	0.069	-13.5	7.6	0.078
Sector	Public	att2_L1	0			0.0		
	Private	att2_L2	-1313	580	0.023	-4.2	3.0	0.162
	NGO	att2_L3	1700	598	0.004	8.2	3.1	0.008
Stability	Earnings are profit dependent	att3_L1	0			0.0		
	Fixed earnings but contract can end at any time	att3_L2	-6764	692	0.000	-36.4	3.6	0.000
	Fixed earnings for a given period of time	att3_L3	-1322	650	0.042	-8.1	3.3	0.016
	Fixed earnings	att3_L4	-2768	659	0.000	-12.3	3.4	0.000
Working hours	60 h per week	att4_L1	0			0.0		
	40 h per week	att4_L2	-978	442	0.027	-53.7	2.3	0.000
	20 h per week	att4_L3	1630	834	0.051	-83.1	4.3	0.000
Vacation	No	att5_L1	0			0.0		
	Yes	att5_L2	3147	336	0.000	13.7	1.7	0.000
Flexible schedule	No	att6_L1	0			0.0		
	Yes	att6_L2	3396	326	0.000	19.3	1.7	0.000
Pension	No	att7_L1	0			0.0		
	10% of earnings/ 40% of wages at age 65	att7_L2	6132	377	0.000	28.7	1.9	0.000
	20% of earnings/ 65% of wages at age 65	att7_L3	6284	595	0.000	33.5	3.1	0.000
Health insurance	No	att8_L1	0			0.0		
	Ksh 800 per month Basic coverage	att8_L2	8004	598	0.000	42.2	3.1	0.000
	Ksh 1600 per month Extended coverage	att8_L3	8178	394	0.000	44.5	2.0	0.000
Unemployment benefits	No	att9_L1	0			0.0		
	2% of wage, gets 50% of wage for 3 months	att9_L2	2721	587	0.000	13.4	3.0	0.000
	4% of wage, gets 80% of wage for 3 months	att9_L3	4395	353	0.000	19.5	1.8	0.000
Commute	More than 2h in traffic	att10_L1	0			0.0		
	Between 1h and 2h in traffic	att10_L2	2118	585	0.000	10.5	3.0	0.000
	Less than 1h in traffic	att10_L3	2897	580	0.000	15.5	3.0	0.000
Skills	Analytical	att11_L1	0			0.0		
	Interpersonal	att11_L2	464	900	0.606	3.7	4.6	0.430
	Organization and control	att11_L3	1088	953	0.254	7.7	4.9	0.118
	Repetitive manual	att11_L4	-864	983	0.379	-1.1	5.1	0.835
	Creative manual	att11_L5	-165	812	0.839	1.1	4.2	0.801
	Social services	att11_L6	1195	803	0.137	6.7	4.1	0.104

Table 6: DCE1 WTP results - Males

			Monthly earnings			Hourly earnings		
Attributes			Coef.	Std. Err.	P>z	Coef.	Std. Err.	P>z
	Outside option	d0	3057	1847	0.098	-11.5	9.5	0.226
Sector	Public	att2_L1						
	Private	att2_L2	-1110	725	0.126	-2.8	3.8	0.456
	NGO	att2_L3	1160	746	0.120	5.8	3.9	0.131
Stability	Earnings are profit dependent	att3_L1						
	Fixed earnings but contract can end at any time	att3_L2	-5865	856	0.000	-31.6	4.4	0.000
	Fixed earnings for a given period of time	att3_L3	-1456	812	0.073	-8.7	4.2	0.038
	Fixed earnings	att3_L4	-2216	823	0.007	-9.4	4.3	0.027
Working hours	60 h per week	att4_L1						
	40 h per week	att4_L2	-523	541	0.334	-51.7	2.8	0.000
	20 h per week	att4_L3	2718	1018	0.008	-78.3	5.2	0.000
Vacation	No	att5_L1						
	Yes	att5_L2	3161	417	0.000	13.8	2.2	0.000
Flexible schedule	No	att6_L1						
	Yes	att6_L2	3167	404	0.000	18.2	2.1	0.000
Pension	No	att7_L1						
	10% of earnings/ 40% of wages at age 65	att7_L2	5113	461	0.000	23.7	2.4	0.000
	20% of earnings/ 65% of wages at age 65	att7_L3	4541	739	0.000	24.8	3.8	0.000
Health insurance	No	att8_L1						
	Ksh 800 per month Basic coverage	att8_L2	6551	736	0.000	34.8	3.8	0.000
	Ksh 1600 per month Extended coverage	att8_L3	6941	474	0.000	38.3	2.4	0.000
Unemployment benefits	No	att9_L1						
	2% of wage, gets 50% of wage for 3 months	att9_L2	2439	734	0.001	12.0	3.8	0.002
	4% of wage, gets 80% of wage for 3 months	att9_L3	4209	439	0.000	18.6	2.3	0.000
Commute	More than 2h in traffic	att10_L1						
	Between 1h and 2h in traffic	att10_L2	1734	728	0.017	8.8	3.8	0.021
	Less than 1h in traffic	att10_L3	2521	722	0.000	13.7	3.8	0.000
Skills	Analytical	att11_L1						
	Interpersonal	att11_L2	-60	1126	0.957	1.3	5.8	0.817
	Organization and control	att11_L3	1776	1183	0.133	11.8	6.1	0.054
	Repetitive manual	att11_L4	264	1228	0.830	5.0	6.4	0.431
	Creative manual	att11_L5	112	1011	0.912	2.8	5.2	0.598
	Social services	att11_L6	624	1000	0.533	4.2	5.2	0.420

Table 7: DCE1 WTP results - Females

Attributes			Monthly earnings			Hourly earnings		
			Coef.	Std. Err.	P>z	Coef.	Std. Err.	P>z
	Outside option	d0	2299	2488	0.355	-15.8	12.7	0.214
Sector	Public	att2_L1						
	Private	att2_L2	-1729	956	0.071	-6.8	4.9	0.170
	NGO	att2_L3	2382	988	0.016	11.2	5.1	0.027
Stability	Earnings are profit dependent	att3_L1						
	Fixed earnings but contract can end at any time	att3_L2	-8135	1162	0.000	-43.5	6.0	0.000
	Fixed earnings for a given period of time	att3_L3	-1105	1075	0.304	-7.1	5.5	0.196
	Fixed earnings	att3_L4	-3633	1089	0.001	-16.8	5.6	0.003
Working hours	60 h per week	att4_L1						
	40 h per week	att4_L2	-1625	751	0.031	-56.6	3.8	0.000
	20 h per week	att4_L3	-1	1423	0.999	-90.4	7.2	0.000
Vacation	No	att5_L1						
	Yes	att5_L2	3148	559	0.000	13.6	2.9	0.000
Flexible schedule	No	att6_L1						
	Yes	att6_L2	3741	545	0.000	21.0	2.8	0.000
Pension	No	att7_L1						
	10% of earnings/ 40% of wages at age 65	att7_L2	7656	645	0.000	36.3	3.3	0.000
	20% of earnings/ 65% of wages at age 65	att7_L3	8829	998	0.000	46.1	5.1	0.000
Health insurance	No	att8_L1						
	Ksh 800 per month Basic coverage	att8_L2	10143	1015	0.000	52.8	5.2	0.000
	Ksh 1600 per month Extended coverage	att8_L3	10028	693	0.000	53.7	3.5	0.000
Unemployment benefits	No	att9_L1						
	2% of wage, gets 50% of wage for 3 months	att9_L2	3164	968	0.001	15.5	5.0	0.002
	4% of wage, gets 80% of wage for 3 months	att9_L3	4658	587	0.000	20.9	3.0	0.000
Commute	More than 2h in traffic	att10_L1						
	Between 1h and 2h in traffic	att10_L2	2715	972	0.005	13.4	5.0	0.007
	Less than 1h in traffic	att10_L3	3486	964	0.000	18.3	4.9	0.000
Skills	Analytical	att11_L1						
	Interpersonal	att11_L2	1246	1484	0.401	7.1	7.6	0.348
	Organization and control	att11_L3	76	1587	0.962	1.8	8.1	0.827
	Repetitive manual	att11_L4	-2484	1625	0.126	-9.6	8.3	0.248
	Creative manual	att11_L5	-593	1347	0.660	-1.4	6.9	0.833
	Social services	att11_L6	2068	1333	0.121	10.7	6.8	0.116

Youth have slight preference for jobs in the public sector or NGOs versus jobs in the private sector. On average, for example, to accept a job in the private sector, the offered salary to female youth respondents would have to be 1,729 Khs per month (~USD17) higher than the same job in the public sector, other things being equal. In general, however, youth prefer jobs in NGOs to jobs in the public sector. Males and females would forgo respectively 1,160 Khs and 2,382 Khs per month for a job in the NGO compared to the same job in the public sector. These results give only marginal support to the hypothesis that part of the youth unemployment challenge is explained by

queuing, which would require larger willingness to pay for public sector jobs. The finding that youth prefer to work in NGOs also suggest that jobs in the civil service, despite more stability and more generous fringe benefits, are less valued than previously thought.

Stability of the job seems to be more important than the stability of earnings. Youth have strong preferences for jobs where earnings are related to profits. For instance, other things being equal, jobs with fixed earnings would require an incremental of 2,768 Khs to be as appealing as jobs for which earnings are profit dependent. For a job with 'fixed earnings' to be appealing, it will have to pay 2,216 Khs per month for males and 3,633 Khs per month for females higher than a job dependent on profits. However, other things being equal, to make a job with fixed earnings that can be terminated at any time' appealing, males would ask for an additional 5,865 Khs (~USD 58) in monthly wages and females would ask for 8,135 Khs (~USD 80) in monthly wages.

When asked about working hours, preferences depend on whether earnings per month are fixed or based on hourly wages. Overall, young respondents seem to be willing to work longer hours for higher monthly payment. For instance, other things being equal, when earnings per month are fixed, youth are willing to forgo 1,630 Khs per month to get a job that offers 20 hours per week instead of a job that offer 60 hours per week. However, when earnings are based on hourly wages, youth would require an extra 83 Khs or 54 Khs per hour to accept a job that offer 20 hours or 40 hours per week, respectively, versus one that offers 60 hours per week. When comparing results by gender and in the scenario where earnings are fixed per month, males seem to prefer to work fewer hours (20 hours per week versus 60 hours per week), whereas females seem to prefer longer hours (60 hours versus 40 hours). When the hourly wage is fixed and the monthly wage can vary, both men and women prefer to work longer hours. Young men, for instance, will ask for additional hourly earnings of 78 Khs (~USD 31 per week) to accept a job of 20 hours per week compared to one of 60 hours. For females, this compensation is with 90 Khs per hour (or USD 36 per week) slightly higher.

Both young men and women of the KYEP in Kenya prefer jobs that offer paid vacations, flexible working hours, and short commuting times. Men would be willing to forgo around 3,161 Khs and 3,167 Khs in monthly wages for a job that offers vacations or flexible working hours. Women would forgo 3,148 Khs for paid vacations and slightly more (3,741 Khs per month) for flexible working hours. The latter might be explained by a different allocation of responsibilities in the household, where women are more likely to take care of children or elderly parents. Probably, for similar reasons, females are willing to forgo a higher amount of their earnings for shorter commuting times compared to men. Young women forgo 3,486 Khs per month (USD 34) for a commute time of less than one hour and 2,715 Khs (USD 27) for a commute time of between one to two hours. Both compared a job that requires more than two hours of commute time. These values are 2,521 Khs and 1,734 Khs for men, respectively.

Among all jobs attributes, the one that matters the most is access to social insurance- health insurance comes first followed by pensions and unemployment benefits. Men would be willing to forgo 6,941 Khs per month (~US68) for jobs that offer health insurance with extended coverage compared to a job without insurance. Women's willingness to pay for health insurance is even higher (10,028 Khs or USD 100 per month). These amounts are quite substantial for a health insurance premium particularly from young people. Young men and women of the KYEP

also value pensions, although less than health insurance (4,541 Khs and 8,829 Khs respectively for the 65 percent replacement rate). Young men, however, tend to prefer a lower mandate (i.e., they are less willing to save for retirement). Thus, to move from a job where the mandate is 65 percent replacement (with a contribution of 20 percent) to one where the mandate is 40 percent replacement (with a contribution of 10 percent), they would need to have an increase in earnings of 572 Khs per month. Finally, regarding unemployment insurance the willingness to pay for an 80 percent replacement rate is 4,209 Khs for men and 4,658 Khs for women. These results are important for the design of social insurance programs. They suggest that, as long as social security contributions are clearly linked to benefits, they will most likely not contribute to increase the tax-wedge.⁵

Neither young men nor young women seem to care much about the tasks that they have to perform at work. There are no statistically significant differences, for instance, between preferences for analytical tasks, manual repetitive tasks, or tasks that involve creativity. Both men and women seem to be equally indifferent about performing tasks related to control and organization than social services. One interpretation of these results is that youth want to work and have a job not matter what type. As long as the jobs has features that we would normally associate with a formal job (stability, social insurance, adequate working conditions), it does not matter so much the types of tasks that they would have to perform.

When comparing the jobs preferences between respondents based on their socio-demographic characteristics, some differences emerge (Table 8). Regarding earning stability, older and single respondents dislike the possibility of contracts ending at any time and find a job with fixed earnings more appealing. Those with children also particularly dislike unstable contracts that could end at any time. Respondents in richer household, however, do not dislike such jobs as much. In terms of working hours, younger respondents and those with higher levels of educational attainment are less willing to accept a 20-hour per week job with a fixed hourly wage. Only marital status makes a difference when it comes to a flexible working schedule. Single youth value flexible working schedules less than married respondents. Regarding pension, only one gender difference stands out: young females value higher pension contribution more. Education and marital status affects the preferences for health insurance. Youth with higher education and single respondents value more extensive health coverage.

Table 8: Interaction with demographic characteristics - DCE 1

	Sector	Earn Stab.	Work hours	Vacation	Flex. sched.	Pension	Health	Unemp.	Comute	Skills
Gender						**				
Age		**	**							
Education			***				***			
Single		**			**		**			
Children		**								
HH income per capita		**								

*** - significant at 1% level; ** - significant at 5% level.

⁵ The tax wedge is defined as the difference between the total cost of labor paid by the employer (which includes payroll taxes) and take-home pay (which is equal to the gross wage minus workers' social security contributions and income taxes).

V. DCEs 2 and 3: Pathway to Work: Support to Self and Wage Employment

The results of DCE2 are presented in Table 9, Table 10 and Table 11 below and those of DCE3 are presented in Table 12, Table 13 and Table 14 below. Tables 5 and 8 present pooled MNL and WTP estimates, while Tables 9-10 (DCE2) and 12-13 (DCE3) are disaggregated by gender. As discussed earlier, differences between gender are not statistically significant for DCE2, and only significant in some cases for DCE3. The main finding is that youth have well defined preferences for different types of services and their willingness to pay varies accordingly. The fact that the WTPs are positive and significant for the majority of services supports the recommendation from the recent meta-analysis of youth employment programs mentioned earlier about offering integrated packages of services to support both access to self and wage employment.

Table 9: DCE 2 Multinomial Logit and WTP

			MNL			WTP		
			Coef.	Std. Err.	P>z	WTP	Std. Err.	P>z
d0			-1.120	0.082	0.000	10097	871	0.000
Helping you access credit	No	att1_L1	0.000		0.000	0		
	Yes	att1_L2	0.490	0.032	0.000	4416	312	0.000
Helping you access equipment/inputs	No	att2_L1	0.000		0.000	0		
	Yes	att2_L2	0.426	0.032	0.000	3845	315	0.000
Helping you access insurance	No	att3_L1	0.000		0.000	0		
	Yes	att3_L2	0.388	0.032	0.000	3499	311	0.000
Training in business management	No	att4_L1	0.000		0.000	0		
	Yes	att4_L2	0.349	0.033	0.000	3145	308	0.000
Training in finance	No	att5_L1	0.000		0.000	0		
	Yes	att5_L2	0.265	0.031	0.000	2385	294	0.000
Advisory services	No	att6_L1	0.000		0.000	0		
	yes	att6_L2	0.218	0.033	0.000	1963	303	0.000
Services to connect to new clients/customers	no	att7_L1	0.000		0.000	0		
	yes	att7_L2	0.226	0.033	0.000	2033	303	0.000
Service provider	public	att8_L1	0.000		0.000	0		
	Private	att8_L2	-0.133	0.032	0.000	-1200	293	0.000
cost - Latent Class 1			1.100	0.065	0.000			
cost - Latent Class 2			-1.100	0.065	0.000			
P(Latent Class 1)			0.654	0.032	0.000			
P(Latent Class 2)			0.346	0.032	0.000			
LL			-4628					
N			18420					

¹ A sequence of 3 questions designed to ascertain awareness, interest and capability of the respondent to answer the DCE questions in the present module were asked prior to entering the DCE sequence. Subsequent analysis by different subgroups constructed based on these questions did not reveal any significant difference between them with the exception of respondents who specifically stated that they “knew nothing about self-employment”. For this subgroup, which represented only 8% of the sample, none of the attributes were significant with the exception of cost, which is a pattern expected from respondents answering randomly to the question and paying only attention to the only attribute they could relate to, namely cost.

Table 10: DCE 2 Multinomial Logit and WTP - Males

			MNL			WTP		
			Coef.	Std. Err.	P>z	WTP	Std. Err.	P>z
		d0	-0.834	0.111	0.000	-7612	1146	0.000
Helping you access credit	no	att1_L1						
	yes	att1_L2	0.536	0.045	0.000	4892	444	0.000
Helping you access equipment/inputs	no	att2_L1						
	yes	att2_L2	0.428	0.045	0.000	3905	446	0.000
Helping you access insurance	no	att3_L1						
	yes	att3_L2	0.418	0.045	0.000	3812	446	0.000
Training in business management	no	att4_L1						
	yes	att4_L2	0.385	0.045	0.000	3513	439	0.000
Training in finance	no	att5_L1						
	yes	att5_L2	0.309	0.044	0.000	2819	418	0.000
Advisory services	no	att6_L1						
	yes	att6_L2	0.246	0.046	0.000	2241	429	0.000
Services to connect to new clients/customers	no	att7_L1						
	yes	att7_L2	0.260	0.046	0.000	2375	431	0.000
Service provider	public	att8_L1						
	Private	att8_L2	-0.166	0.045	0.000	-1513	413	0.000
		cost - Latent Class 1	-1.096	0.062	0.000			
		cost - Latent Class 2	1.096	0.062	0.000			
		P(Latent Class 1)	0.700	0.042	0.000			
		P(Latent Class 2)	0.300	0.042	0.000			
		LL	-2585					
		N	10260					

Table 11: DCE 2 Multinomial Logit and WTP - Females

			MNL			WTP		
			Coef.	Std. Err.	P>z	WTP	Std. Err.	P>z
		d0	-1.456	0.124	0.000	12754	1320	0.000
Helping you access credit	no	att1_L1						
	yes	att1_L2	0.440	0.046	0.000	3856	431	0.000
Helping you access equipment/inputs	no	att2_L1						
	yes	att2_L2	0.429	0.046	0.000	3760	438	0.000
Helping you access insurance	no	att3_L1						
	yes	att3_L2	0.356	0.046	0.000	3118	427	0.000
Training in business management	no	att4_L1						
	yes	att4_L2	0.311	0.047	0.000	2729	427	0.000
Training in finance	no	att5_L1						
	yes	att5_L2	0.219	0.045	0.000	1915	407	0.000
Advisory services	no	att6_L1						
	yes	att6_L2	0.188	0.047	0.000	1644	423	0.000
Services to connect to new clients/customers	no	att7_L1						
	yes	att7_L2	0.189	0.047	0.000	1658	419	0.000
Service provider	public	att8_L1						
	Private	att8_L2	-0.098	0.047	0.036	-855	409	0.037
		cost - Latent Class 1	-1.141	0.066	0.000			
		cost - Latent Class 2	1.141	0.066	0.000			
		P(Latent Class 1)	0.620	0.046	0.000			
		P(Latent Class 2)	0.380	0.046	0.000			
		LL	-2258					
		N	9180					

Table 12: DCE 3 Multinomial Logit and WTP

			MNL			WTP		
			Coef.	Std. Err.	P>z	WTP	Std. Err.	P>z
d0			-1.118	0.091	0.000	-8,121	698	0.000
Counseling	Aptitude test	att1_L1						
	Group counseling	att1_L2	0.130	0.047	0.005	946	340	0.005
	Face to face meetings	att1_L3	0.143	0.025	0.000	1,040	183	0.000
Technical training	60-100 hours in 2-4 months	att2_L1						
	150-200 hours in 6 months	att2_L2	0.035	0.025	0.158	256	182	0.159
	300-450 hours in 9 months	att2_L3	0.028	0.046	0.541	203	332	0.542
Training to improve behaviors	Nothing	att3_L1						
	Job interview techniques	att3_L2	0.4849	0.0483	0.000	3,522	362	0.000
	Personal presentation assistance	att3_L3	0.566	0.048	0.000	4,113	363	0.000
Wage Subsidies	Nothing	att4_L1						
	between 20 and 50%	att4_L2	0.312	0.025	0.000	2,268	193	0.000
	more than 50%	att4_L3	0.402	0.045	0.000	2,920	332	0.000
Job search assistance	None	att5_L1						
	Information about jobs in center	att5_L2	0.4087	0.0503	0.000	2,968	368	0.000
	Information about jobs in SMS	att5_L3	0.513	0.057	0.000	3,724	424	0.000
	Advice on how to search for a job	att5_L4	0.647	0.050	0.000	4,696	374	0.000
Internships/on the job training	6 months	att6_L1						
	12 months	att6_L2	-0.0697	0.0451	0.122	-506	327	0.121
	24 months	att6_L3	-0.308	0.045	0.000	-2,240	331	0.000
Service provider	Public provider	att7_L1						
	Private provider	att7_L2	-0.060	0.024	0.011	-438	173	0.011
cost - Latent Class 1			-1.377	0.040	0.000			
cost - Latent Class 2			1.377	0.040	0.000			
P(Latent Class 1)			0.737	0.023	0.000			
P(Latent Class 2)			0.263	0.023	0.000			
LL			-11494					
N			40824					

² A sequence of 3 questions designed to ascertain awareness, interest and capability of the respondent to answer the DCE questions in the present module were asked prior to entering the DCE sequence. Subsequent analysis by different subgroups constructed based on these questions did not reveal any significant difference between them with the exception of respondents who specifically stated that they “knew nothing about wage-employment”. For this subgroup, which represented only 8% of the sample, none of the attributes were significant with the exception of cost, which is a pattern expected from respondents answering randomly to the question and paying only attention to the only attribute they could relate to, namely cost.

Table 13: DCE 3 Multinomial Logit and WTP - Males

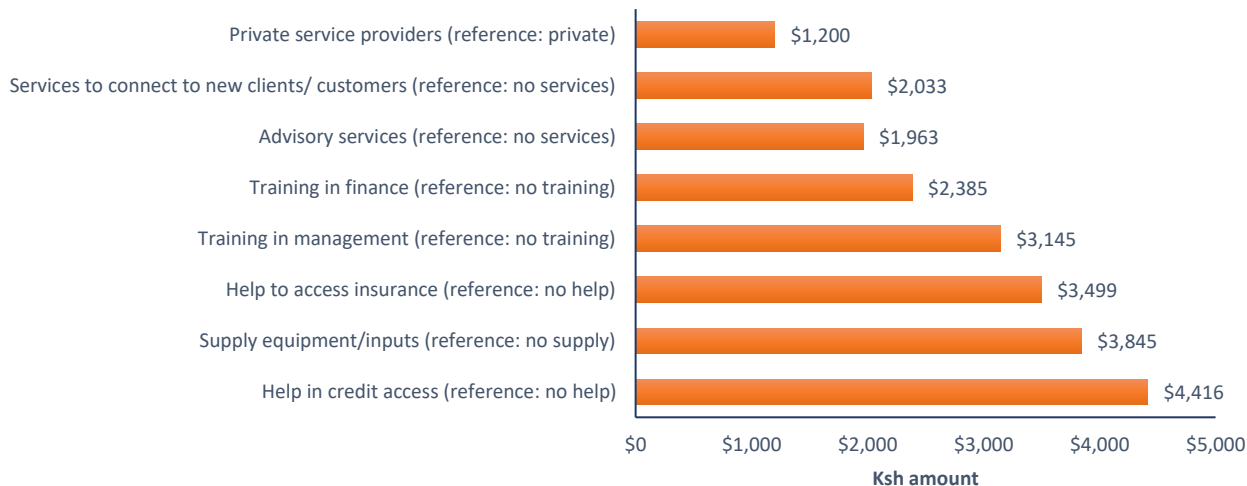
			MNL			WTP		
			Coef.	Std. Err.	P>z	WTP	Std. Err.	P>z
		d0	-0.841	0.121	0.000	-5,772	856	0.000
Counseling	Aptitude test	att1_L1						
	Group counseling	att1_L2	0.149	0.064	0.019	1,020	437	0.020
	Face to face meetings	att1_L3	0.179	0.034	0.000	1,226	236	0.000
Technical training	60-100 hours in 2-4 months	att2_L1						
	150-200 hours in 6 months	att2_L2	0.021	0.034	0.540	143	234	0.540
	300-450 hours in 9 months	att2_L3	0.010	0.062	0.875	67	427	0.875
Training to improve behaviors	Nothing	att3_L1						
	Job interview techniques	att3_L2	0.4973	0.0656	0.000	3,413	462	0.000
	Personal presentation assistance	att3_L3	0.606	0.065	0.000	4,158	464	0.000
Wage Subsidies	Nothing	att4_L1						
	between 20 and 50%	att4_L2	0.255	0.034	0.000	1,749	242	0.000
	more than 50%	att4_L3	0.407	0.061	0.000	2,794	427	0.000
Job search assistance	None	att5_L1						
	Information about jobs in center	att5_L2	0.3864	0.0681	0.000	2,652	471	0.000
	Information about jobs in SMS	att5_L3	0.409	0.079	0.000	2,806	548	0.000
	Advice on how to search for a job	att5_L4	0.564	0.068	0.000	3,867	473	0.000
Internships/on the job training	6 months	att6_L1						
	12 months	att6_L2	-0.0586	0.0614	0.340	-402	421	0.339
	24 months	att6_L3	-0.332	0.061	0.000	-2,281	426	0.000
Service provider	Public provider	att7_L1						
	Private provider	att7_L2	0.017	0.032	0.605	114	221	0.605
		cost - Latent Class 1	-1.457	0.054	0.000			
		cost - Latent Class 2	1.457	0.054	0.000			
		P(Latent Class 1)	0.786	0.029	0.000			
		P(Latent Class 2)	0.214	0.029	0.000			
		LL	-6271					
		N	22176					

Table 14: DCE 3 Multinomial Logit and WTP - Females

			MNL			WTP		
			Coef.	Std. Err.	P>z	WTP	Std. Err.	P>z
		d0	-0.841	0.121	0.000	-5,772	856	0.000
Counseling	Aptitude test	att1_L1						
	Group counseling	att1_L2	0.149	0.064	0.019	1,020	437	0.020
	Face to face meetings	att1_L3	0.179	0.034	0.000	1,226	236	0.000
Technical training	60-100 hours in 2-4 months	att2_L1						
	150-200 hours in 6 months	att2_L2	0.021	0.034	0.540	143	234	0.540
	300-450 hours in 9 months	att2_L3	0.010	0.062	0.875	67	427	0.875
Training to improve behaviors	Nothing	att3_L1						
	Job interview techniques	att3_L2	0.4973	0.0656	0.000	3,413	462	0.000
	Personal presentation assistance	att3_L3	0.606	0.065	0.000	4,158	464	0.000
Wage Subsidies	Nothing	att4_L1						
	between 20 and 50%	att4_L2	0.255	0.034	0.000	1,749	242	0.000
	more than 50%	att4_L3	0.407	0.061	0.000	2,794	427	0.000
Job search assistance	None	att5_L1						
	Information about jobs in center	att5_L2	0.3864	0.0681	0.000	2,652	471	0.000
	Information about jobs in SMS	att5_L3	0.409	0.079	0.000	2,806	548	0.000
	Advice on how to search for a job	att5_L4	0.564	0.068	0.000	3,867	473	0.000
Internships/on the job training	6 months	att6_L1						
	12 months	att6_L2	-0.0586	0.0614	0.340	-402	421	0.339
	24 months	att6_L3	-0.332	0.061	0.000	-2,281	426	0.000
Service provider	Public provider	att7_L1						
	Private provider	att7_L2	0.017	0.032	0.605	114	221	0.605
		cost - Latent Class 1	-1.457	0.054	0.000			
		cost - Latent Class 2	1.457	0.054	0.000			
		P(Latent Class 1)	0.786	0.029	0.000			
		P(Latent Class 2)	0.214	0.029	0.000			
		LL	-6271					
		N	22176					

Self-employment. When it comes to self-employment, youth value above all financial services and, in particular, access to credit. The WTP for this service is estimated at 4,416 Khs or USD 43. This result is consistent with the hypothesis that youth face substantial credit constraints, also because of the lack of collateral and credit history. Youth seem to prefer credit even to the alternative of obtaining directly inputs and equipment. At 3,845 Khs, their willingness to pay for this type of service is 13 percent lower with respect to the WTP for obtaining access to credit. Access to insurance ranks third with a WTP of 3,499 Khs (Figure 3).

Figure 3: Services WTP



Training and advisory services come next, including those to help connect entrepreneurs to clients and new markets. However, there are significant differences in the valuation of different types of training. Training in business management, for instance, is valued 32 percent more than training in finance (3,145 Khs vs. 2,385 Khs). Training in financial services, in turn, is valued 20 percent more than advisory services. One might speculate that differences in preferences for different types of training/advisory services to be correlated with the education of the beneficiary, but as discussed below, we do not find statistically significant effects.

The results remain substantially unchanged when controlling for key individual characteristics (Table 15). There are no statistically significant differences by gender, number of children, or household income. Only age makes a difference when it comes to training in finance. Older beneficiaries value this type of training more than young beneficiaries, presumably as other constraints become less binding or as they plan complex entrepreneurial undertakings. Education only affects preferences for access to credit and equipment. Youth with higher education value more these services than other youth. Again, results indicate that for skilled workers ready to start a business, probably a higher-end business, credit becomes the most binding constraint. Single individuals, on the other hand, seem to value credit less presumably because of a less binding budget constraint.

Table 15: Interaction with demographic characteristics - DCE 2

	Credit	Equip.	Insur.	Tr. business	Tr. finance	Advisory	Connect	Provider
Gender								
Age					**			
Education	***	**						
Single	**							
Children								
HH income per capita								

*** - significant at 1% level; ** - significant at 5% level.

Wage employment. In terms of access to wage employment, youth have a clear preference for job search assistance. In particular, youth demand advice on how to search for a job and their willingness to pay is 4,696 Khs (about USD 47). Youth also value receiving information about jobs and seem to prefer to obtain this information electronically, via text messages, then through the employment offices. Their willingness to pay for the former is 25 percent higher than for the latter. This raises questions about the design of current intermediation systems in Public Employment Services that often rely on centralized systems accessible only at a physical facility.

Youth value training in soft-skills but their willingness to pay for technical training is almost zero. Their interest, in particular, is in training that can help them improve the way the present themselves and how they handle jobs interviews. Their willingness to pay is around 4,100 Khs and 3,500 Khs, respectively. This gives support to the importance of soft-skills as part of ALMPs. At the same time, there is no demand for technical training, and as discussed below this hold regardless the level of education. It is an important finding given the prevalence of technical training programs, including the case of the KYEP, and evidence suggesting that employers are more likely to focus on soft-skills, considering that technical skills can be acquired on the job.

Wage subsidies and internships remain important elements of an integrated portfolio. Youth value these two types of support services similarly and, not surprisingly, the more the better. International experiences suggest that wage subsidies should be seen more as an incentive for employers to finance training and build human capital, rather than interventions to create jobs.⁶ In part this is given by the substitution and dead-weight losses associated with this type of programs.

Controlling for individual characteristics does not affect the results (Table 16). Age, education, and the number of children do not generate statistically significant interactions. Gender interacts positively with wage subsidies and job search assistance. Women value these services more than men. Single individuals also seem more likely than married individuals to value more wage subsidies (the reasons is unclear). Finally, household income interacts positively with training for job search. Higher income households have a higher willingness to pay for this type of training. One interpretation would be that individuals from better-off households are more likely to target jobs in sectors/occupations where job interviews are more prevalent and have a more important role to play in the assessment of the candidate.

⁶ Almeida R.; Orr, L.; Robalino, D. (2014). *Wage subsidies in developing countries as a tool to build human capital: design and implementation issues*. IZA Journal of Labor Policy 3:12 [http://www.iza-jolp.com/content/3/1/12].

Table 16: Interaction with demographic characteristics - DCE 3

	Counseling	Tech. tr.	Tr. Behav.	Subsidies	Job search	Internship	Provider
Gender				**	***		***
Age							
Education							
Single				**			
Children							
HH income per capita			**				**

*** - significant at 1% level; ** - significant at 5% level.

Conclusion

This paper applied Discrete Choice Experiments (DCE) to improve our understanding of youth preferences for different types of jobs, and their willingness to pay for support services to access wage and/or self-employment. We find that youth, in general, prefer jobs that resemble formal jobs regardless of the tasks involved. Thus, they value stability, access to social insurance (in particular health insurance), and adequate working conditions. They don't have well defined preferences though between analytical vs. manual repetitive tasks or tasks that involve interpersonal/organizational skills or creativity. The main services youth demand to facility access to wage employment include jobs search assistance and training on soft-skills, followed by OJT and wage subsidies; they are not interested in technical training. For self-employment, they mainly seek support accessing credit, inputs and equipment, and insurance.

One of the important contributions of the present study was to provide, probably for the first time, estimates of the willingness to pay (WTP) for different ALMPs. One of the motivations was understanding whether it was possible to finance part of the cost of ALMPs through individual contributions. The results are mixed. On one hand, willingness to pay for individual services ranging from 1,500 Khs to 4,500 Khs (or USD 15 to 45) seem small relative to an average per capita cost of youth focused ALMPs. Indeed, estimates for these costs range from USD 500 to up to 3,000 in the case of some of the youth programs in Latin America. At the same time, these costs usually involve multiple services. If WTPs are additive, individual's willingness to pay for package of services that offers job search assistance, training for interviews, wage subsidies and internships could be in the order of 100 Khs or 20 percent of the cost of the cheapest program; a non-negligible amount. We also notice that in the case of Kenya the average willingness to pay for individual programs is substantial relative to the payments made for programs beneficiaries and employers.

Despite the new insights the DCE methodology brings, there are issues in terms of design that need to be taken into account. First, the questionnaire can be too complex for low-skilled/illiterate populations. Related to this, the survey is rather time intensive and costly in that regard. Finally, it is difficult to produce standard questions per country for a wide set of constraints. In the future, it would be important to continue applying the DCE methodology in different settings and exploring alternatives for simplification.

Bibliography

- Almeida R.; Orr, L.; Robalino, D. (2014). *Wage subsidies in developing countries as a tool to build human capital: design and implementation issues*. IZA Journal of Labor Policy 3:12 [http://www.izajolp.com/content/3/1/12].
- Arifin, Bustanul, et al. "A conjoint analysis of farmer preferences for community forestry contracts in the Sumber Jaya Watershed, Indonesia." *Ecological Economics* 68.7 (2009): 2040-2050.
- Baltussen, Rob, and Louis Niessen. "Priority setting of health interventions: the need for multi-criteria decision analysis." *Cost Effectiveness and Resource Allocation* 4.1 (2006): 14.
- Baltussen, Rob, et al. "Towards a multi-criteria approach for priority setting: an application to Ghana." *Health economics* 15.7 (2006): 689-696.
- Bennett, Jeff, and Ekin Birol, eds. *Choice experiments in developing countries: Implementation, challenges and policy implications*. Cheltenham: Edward Elgar, 2010.
- Birol, Ekin, Melinda Smale, and Ágnes Gyovai. "Using a choice experiment to estimate farmers' valuation of agrobiodiversity on Hungarian small farms." *Environmental and Resource Economics* 34.4 (2006): 439-469.
- Blaauw, D., et al. "Policy interventions that attract nurses to rural areas: a multicountry discrete choice experiment." *Bulletin of the World Health Organization* 88.5 (2010): 350-356.
- de Bekker-Grob, Esther W., Mandy Ryan, and Karen Gerard. "Discrete choice experiments in health economics: a review of the literature." *Health economics* 21.2 (2012): 145-172.
- Hanley, Nick, Susana Mourato, and Robert E. Wright. "Choice Modelling Approaches: A Superior Alternative for Environmental Valuation?." *Journal of economic surveys* 15.3 (2001): 435-462.
- Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review*, 80(4), 237-251.
- Kim, Jae Hong, Francesca Pagliara, and John Preston. "The intention to move and residential location choice behaviour." *Urban Studies* 42.9 (2005): 1621-1636.
- Kluge, J, Puerto, S, Robalino, D, Romero, J.R, Rother, F, Stöterau, J, Weidenkaff, F, Witte, W. (2016). *Do Youth Employment Programs Improve Labor Market Outcomes? A Systematic Review*. IZA DP No. 10263
- Kolstad, Julie Riise. "How to make rural jobs more attractive to health workers. Findings from a discrete choice experiment in Tanzania." *Health economics* 20.2 (2011): 196-211.
- Kruk, Margaret E., et al. "Rural practice preferences among medical students in Ghana: a discrete choice experiment." *Bulletin of the World Health Organization* 88.5 (2010): 333-341.
- Kruk, Margaret E., et al. "Women's preferences for obstetric care in rural Ethiopia: a population-based discrete choice experiment in a region with low rates of facility delivery." *Journal of epidemiology and community health* 64.11 (2010): 984-988.

- Kruk, Margaret E., et al. "Women's preferences for place of delivery in rural Tanzania: a population-based discrete choice experiment." *American journal of public health* 99.9 (2009): 1666.
- Lagarde, Mylene, and Duane Blaauw. "A review of the application and contribution of discrete choice experiments to inform human resources policy interventions." *Hum Resour Health* 7.62 (2009): 10-1186.
- Lanfranchi, Joseph, Mathieu Narcy, and Makram Larguem. "Shedding new light on intrinsic motivation to work: evidence from a discrete choice experiment." *Kyklos* 63.1 (2010): 75-93.
- Lee, Young-joo, and Doyeon Won. "Attributes influencing college students' participation in volunteering: a conjoint analysis." *International Review on Public and Nonprofit Marketing* 8.2 (2011): 149-162.
- Louviere, Jordan J., and George Woodworth. "Design and analysis of simulated consumer choice or allocation experiments: an approach based on aggregate data." *Journal of marketing research* (1983): 350-367.
- Louviere, Jordan J., David A. Hensher, and Joffre D. Swait. *Stated choice methods: analysis and applications*. Cambridge University Press, 2000.
- Luce, D. R. (1959): *Individual Choice Behavior*. Wiley.
- Mangham, Lindsay J., and Kara Hanson. "Employment preferences of public sector nurses in Malawi: results from a discrete choice experiment." *Tropical Medicine & International Health* 13.12 (2008): 1433-1441.
- Mangham, Lindsay J., Kara Hanson, and Barbara McPake. "How to do (or not to do)... Designing a discrete choice experiment for application in a low-income country." *Health Policy and Planning* 24.2 (2009): 151-158.
- Manski, C.F., 1977. The structure of random utility models. *Theory and decision*, 8(3), 229-254.
- Marschak, J. (1960): *Binary-choice constraints and random utility indicators*, in *Proceedings of a Symposium on Mathematical Methods in the Social Sciences*, vol. 7, pp. 19-38.
- McFadden, D. 1973. Conditional logit analysis of qualitative choice behavior. In P. Zarembka (ed.), *Frontiers in Economics*, New York, Academic Press.
- Pouliakas, Konstantinos, and Ioannis Theodossiou. "Measuring the utility cost of temporary employment contracts before adaptation: A conjoint analysis approach." *Economica* 77.308 (2010): 688-709.
- Rouwendal, Jan, and Erik Meijer. "Preferences for housing, jobs, and commuting: a mixed logit analysis." *Journal of regional science* 41.3 (2001): 475-505.
- Ryan, Mandy, and Karen Gerard. "Using discrete choice experiments to value health care programmes: current practice and future research reflections." *Applied health economics and health policy* 2.1 (2003): 55-64.
- Ryan, Mandy, and Reader Karen Gerard. "Discrete choice experiments in a nutshell." *Using discrete choice experiments to value health and health care*(2008): 13-46.
- Scheve, Kenneth F., and Matthew J. Slaughter. "Labor market competition and individual preferences over immigration policy." *Review of Economics and Statistics* 83.1 (2001): 133-145.

Scotland, Graham S., et al. "Women's preferences for aspects of labor management: results from a discrete choice experiment." *Birth* 38.1 (2011): 36-46.

Scott, Anthony. "Eliciting GPs' preferences for pecuniary and non-pecuniary job characteristics." *Journal of health economics* 20.3 (2001): 329-347.

Thurstone, L. L. 1927. A Law of Comparative Judgement. *Psychological Review*, 34:272-86.

Train, Kenneth E. *Discrete choice methods with simulation*. Cambridge university press, 2009.

Ubach, Cristina, et al. "What do hospital consultants value about their jobs? A discrete choice experiment." *BMJ* 326.7404 (2003): 1432.

Vincent, J. R., Carson, R. T., DeShazo, J. R., Schwabe, K. A., Ahmad, I., Chong, S. K., ... & Potts, M. D. (2014). Tropical countries may be willing to pay more to protect their forests. *Proceedings of the National Academy of Sciences*, 111(28), 10113-10118.

ANNEX 1

Additional Tables

Figure A. 1: Screenshot DCE 1 Survey Choice Task

Scenario 1 of 20:

Please review the characteristics of each of the options and answer the three questions at the bottom of the screen.

Job Characteristic	Job A	Job B	Job C
Monthly earnings	Ksh 34500	Ksh 21000	Ksh 16500
Public / Private / NGO sector	Private sector job	Non profit organization (NGO)	Private sector job
Earnings stability	Fixed earnings as mentioned above	Fixed earnings for a given period of time	Fixed earnings as mentioned above
Working hours	Full time with some overtime (approx. 60 hours per week)	Full time with some overtime (approx. 60 hours per week)	Full time (approx. 40 hours per week)
Vacation	No	No	Yes
Flexible schedule	No	Yes	Yes
Pension	10% of earnings gets pension of 40% of wages at age 65	10% of earnings gets pension of 40% of wages at age 65	10% of earnings gets pension of 40% of wages at age 65
Health Insurance	No	No	Ksh 1,600 per month Extended coverage (90% of total health expenses, including drugs, are covered)
Unemployment benefits	No	4% of wage, gets 80% of wage for 3 months	No
Commute time	Between 1h and 2h in traffic	Less than 1h in traffic	Between 1h and 2h in traffic
Type of skills required	Creative manual	Creative manual	Social services and care

Q1. Which job do you prefer the most?

Job A
 Job B
 Job C

Q2. Which job do you prefer the least?

Job A
 Job B
 Job C

Q3. Please indicate, if you were offered these 3 jobs, what you would do?

I would consider accepting all of them
 I would consider accepting some of them (but not others)
 I would not accept any of them. I would rather keep looking and wait until a better job came along

* If you want to review some job characteristics again, please click [here](#).

Figure A. 2 Screenshot DCE 2 Survey Choice Task

Scenario 1 of 20:

Please review the components of each package below and answer the two questions at the bottom of the screen.

Package Component	Package A	Package B
Helping you access credit	Yes	No
Supply equipment / inputs	No	Yes
Helping you access insurance	Yes	No
Training in business management	No	Yes
Training in finance	Yes	No
Advisory services	No	Yes
Services to connect to new clients / customers	Yes	No
Service provider	Public provider / Government	Private provider
Your costs (one-time payment)	Ksh 2,500	Ksh 7,500

Q1. Which package do you find the most attractive?

Package A Package B

Q2. Please choose one of the following:

both packages are worth implementing
 only the package I chose above is worth implementing
 neither one is worth implementing

* If you want to review some package components again, please click [here](#).

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Figure A. 3: Screenshot DCE 3 Survey Choice Task

Scenario 1 of 21:

Please review the components of each package below and answer the three questions at the bottom of the screen.

Package Component	Package A	Package B	Package C
Counseling	Face to face meetings	Aptitude test	Face to face meetings
Technical training	60-100 hours in 2-4 months	150-200 hours in 6 months	150-200 hours in 6 months
Training to improve behaviors	Personal presentation, attitudes, and interactions with others	Job interview and communications techniques	Personal presentation, attitudes, and interactions with others
Wage Subsidies	Nothing	Between 20 and 50%	Between 20 and 50%
Job search assistance	You have a person that gives you advice on how to search for a job, helps with your CV, and suggests places to go	Information about jobs in a center or through a computer	Information about jobs in a center or through a computer
Internships/on the job training	12 months	24 months	12 months
Service provider of all services EXCEPT wage subsidies	Private provider	Public provider / Government	Public provider / Government
Your costs (one-time payment)	Ksh 7,500	Ksh 5,000	Ksh 7,500

Q1. Which package do you find most attractive?

Package A Package B Package C

Q2. Which package do you find least attractive?

Package A Package B Package C

Q3. Please choose one of the following:

all the packages are worth implementing
 some of the packages are worth implementing but not others
 none of the packages are worth implementing

If you want to review some package components again, please click [here](#).

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