The Hidden Cost of Graduate Unemployment: How Job Search Duration Affects Household Welfare and Young People's Economic Independence in Kenya

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DOI: https://doi.org/10.47772/IJRISS.2026.101000680

Received: 28 October 2026; Accepted: 02 November 2026; Published: 15 November 2026

ABSTRACT

Kenya's economy continues to add jobs, yet most of them are informal, and university graduates increasingly wait long periods before their first stable employment. This paper examines how the duration of job search affects household welfare and the economic independence of young Kenyans. It adopts a descriptive desktop design that combines official labour-force statistics from the Kenya National Bureau of Statistics (KNBS), a 2026 graduate-employability study by the Commission for University Education (CUE), a KIPPRA graduate survey and KNBS poverty lines, and it applies simple, transparent formulas to these sources. The calculations show that 52.9 per cent of unemployed Kenyans had been searching for more than twelve months in the first quarter of 2019, rising to 62.8 per cent among those aged 25–29, which implies mean spells of about 19–26 months under steady-state assumptions. Graduates take an average of 11.6 months to find a first job; at the graduate pay levels reported by KIPPRA this represents KSh 0.62–0.91 million in foregone earnings, equal to 63–92 per cent of average annual formal-sector earnings (KSh 988,200 in 2025). Within a household, supporting one jobless adult reduces consumption per adult equivalent by 17–33 per cent and can push households that sit up to 20–50 per cent above the poverty line into poverty. The paper concludes that prolonged search is a household-level shock and a delay in economic independence, not merely a labour-market statistic, and recommends longitudinal graduate tracking, work-integrated learning and targeted transition support.

Keywords: graduate unemployment, job search duration, household welfare, economic independence, youth, Kenya, search theory, hysteresis.

INTRODUCTION

Economic expansion is generally expected to create jobs and raise household incomes. In Kenya, however, the labour market that young graduates enter is marked by informality and slow formal hiring. According to the KNBS Economic Survey 2026, as summarised in press reports, total recorded employment outside small-scale agriculture reached 21.6 million in 2025 from 20.8 million in 2024, but wage employment rose only from 3.21 million to 3.32 million (about 110,000 jobs, or 3.4 per cent), while the informal sector added 716,800 jobs to reach 18.1 million workers (The Kenya Times, 2026; The Standard, 2026). Informal activity therefore accounted for about 87 per cent of the 822,100 new jobs reported for 2025 ($716{,}800/822{,}100 = 0.872$). A continental labour-market report likewise found that only 8.6 per cent of employed Kenyan youth hold formal jobs (The Star, 2026).

For university graduates the consequence is a long wait. The CUE study *Employability of Graduates in Kenya* (2026), as reported in the press, finds that graduates take an average of 11.6 months to secure a first job; only 25.3 per cent are employed within six months, 34.7 per cent take six to twelve months, 26.7 per cent take one to two years and 13.3 per cent wait more than two years (Daily Nation, 2026; Eastleigh Voice, 2026). A search that lasts a year or more is not a private inconvenience. It is paid for by households that feed, house and educate the job seeker, and it postpones the moment at which a young person can form an independent household, repay obligations and save.

Macroeconomic debate usually summarises this problem through the unemployment rate. That headline hides two things that matter for welfare: how *long* people remain unemployed, and *who bears the cost* while they do. Search theory predicts that the longer a spell lasts, the larger the lost earnings (Mortensen, 1970; McCall, 1970); hysteresis theory warns that long spells can leave lasting scars on skills and wages (Blanchard & Summers, 1986; Arulampalam, 2001); and household economics shows that a jobless adult changes the consumption possibilities of everyone in the household (Becker, 1981; Deaton, 1997). Yet Kenyan evidence rarely links these three strands within a single quantitative framework.

1.1 Statement of the Problem

Graduate job search in Kenya is lengthening, but the welfare cost of that delay is not measured. Official statistics report unemployment rates and, occasionally, the share of long-term unemployed, while graduate studies report average waiting times; neither converts duration into foregone income or household-level consumption effects. Without such measurement, policy treats graduate unemployment as a skills or numbers problem rather than a household-welfare and independence problem.

1.2 Objectives of the Study

The paper pursues four objectives:

(i) to establish the extent and age pattern of long-duration unemployment among young Kenyans;

(ii) to estimate the earnings foregone during graduate job search;

(iii) to assess the effect of a jobless graduate on household consumption and poverty vulnerability; and

(iv) to identify the research and policy gaps that limit young people's transition to economic independence.

1.3 Research Questions

How long do young Kenyans and graduates search for work? What does that duration cost in foregone earnings? How does supporting a jobless graduate alter household consumption relative to the poverty line? Which gaps in policy and evidence prolong the transition to independence?

1.4 Significance and Scope

The paper contributes a transparent, replicable method for converting published duration statistics into welfare indicators using only official or institutional data. It covers young people aged 18–34, the constitutional definition of youth (Republic of Kenya, 2010), with emphasis on the 20–29 cohort in which most graduates enter the labour market. It is a desktop study and does not estimate causal effects.

LITERATURE REVIEW

2.1 Introduction

This section reviews the theories that link search duration to earnings and welfare, and the empirical evidence available for Kenya and comparable economies.

2.2 Theoretical Review

Job search theory. In the partial-equilibrium search model of McCall (1970) and Mortensen (1970), an unemployed worker receives wage offers at rate λ from a distribution F, enjoys a flow value b while unemployed (benefits, home production and family support) and discounts the future at rate r. The worker accepts any offer above a reservation wage w_R that satisfies

$$w_R = b + \frac{\lambda}{r}\int_{w_R}^{\infty}(w - w_R)\,dF(w)$$

The exit rate (hazard) from unemployment is

$$h = \lambda[1 - F(w_R)], \qquad E[D] = \frac{1}{h} \text{ (if h is constant)}$$

Two implications matter here. First, anything that raises b, including household transfers, raises w_R and lengthens search, although it also allows a better match. Second, anything that lowers the arrival rate λ, such as a scarcity of vacancies or the absence of work experience, lowers h and lengthens spells without any change in worker preferences.

Matching and hysteresis. Mortensen and Pissarides (1994) model hires as the outcome of a matching function $M = m(U, V)$, where U is the number of job seekers and V the number of vacancies. The job-finding rate $f(\theta) = M/U$ falls when labour-market tightness $\theta = V/U$ is low, which is the situation facing graduates when the stock of seekers grows faster than formal vacancies (Pissarides, 2000). Blanchard and Summers (1986) show that when long spells erode skills and attachment, unemployment becomes persistent: temporary shocks have permanent effects on the equilibrium rate.

Human capital and signalling. Human capital theory treats education as an investment that raises productivity and earnings (Becker, 1964). Signalling theory adds that a degree also conveys unobserved ability to employers (Spence, 1973). When degrees are plentiful and employers demand experience, a qualification alone does not shorten search, and the investment's payoff is delayed.

Duration dependence and scarring. Heckman and Singer (1984) distinguish *spurious* duration dependence, caused by unobserved differences between workers, from *true* duration dependence, in which the act of remaining unemployed lowers future job-finding chances. Arulampalam (2001) finds that an unemployment spell lowers subsequent wages relative to continuous employment. Studies of graduates entering weak labour markets find large and persistent earnings losses (Kahn, 2010; Oreopoulos, von Wachter & Heisz, 2012; Schwandt & von Wachter, 2019).

Household economics. Under the permanent-income hypothesis, households smooth consumption across income shocks (Friedman, 1957), and the family functions as an insurance and transfer unit (Becker, 1981). Because households differ in size and composition, welfare is measured per adult equivalent (Deaton, 1997). A jobless adult adds consumption needs without adding income, so the household's consumption per adult equivalent falls unless it draws on savings, borrows or cuts other spending.

2.3 Empirical Review

A KIPPRA survey of 304 diploma and degree holders who graduated between 2008 and 2018 reports a mean search duration of 15.2 months and a mean monthly pay of KSh 78,620, with longer searches among men and among those aged 25–29 than among those aged 20–24 (Khainga & Mbithi, 2018). The sample was assembled by snowballing, so it is informative but not representative. The 2026 CUE study documents an average of 11.6 months and identifies lack of work experience as the leading barrier, followed by limited vacancies, skills mismatch and weak professional networks (CUE, 2026). Elsewhere in Africa, Kingdon and Knight (2004) find that unemployment in South Africa is largely involuntary and that the unemployed are materially worse off than comparable workers. Krueger and Mueller (2011) report that search effort declines and well-being is low as unemployment lengthens, which is consistent with discouragement.

The evidence therefore establishes that search is long and costly, but it leaves three links unquantified for Kenya: how duration converts into foregone income, how that income loss is absorbed within households, and how it delays independence. This paper addresses these links with the data that are publicly available.

RESEARCH METHODOLOGY

3.1 Research Design

The study adopts a descriptive desktop design based on secondary data, appropriate where reliable published data exist and the aim is to describe patterns and compute indicators rather than test causal hypotheses (Creswell & Creswell, 2018). All figures are taken from the sources in Table A; every derived indicator is the author's own calculation, and the working is shown.

3.2 Data Sources

Table A: Data sources

Source	Content used	Period
KNBS Quarterly Labour Force Report, Q1 2019	Unemployment, long-term unemployment (more than 12 months), NEET and underutilisation by age	Jan–Mar 2019
KNBS Quarterly Labour Force Report, Q4 2022	Age-specific unemployment and long-term unemployment	Oct–Dec 2022
CUE, Employability of Graduates in Kenya	Mean and distribution of time to first job	2026
KIPPRA Discussion Paper No. 214	Graduate search duration and monthly pay (n = 304)	2018
KNBS Economic Survey 2026	Average annual earnings per wage employee; employment totals	2025
KNBS Kenya Poverty Report (2022 Kenya Continuous Household Survey)	Overall poverty lines; mean consumption per adult equivalent	2022

3.3 Analytical Framework

Eight expressions are used. The unemployment rate is

$$u = \frac{U}{E + U} \qquad (1)$$

where U is the number of unemployed and E the number employed. KNBS defines long-term unemployment as continuous unemployment of twelve months or more (KNBS, 2019). The long-term share of the unemployed is

$$s = \frac{LTU}{U} \qquad (2)$$

If the population is in a steady state and the exit hazard h is constant, the elapsed durations of those currently unemployed follow an exponential distribution, so the probability that an unemployed person has already searched for more than twelve months is $s = e^{-12h}$. Solving for the implied monthly hazard and mean duration gives

$$h = -\frac{\ln s}{12}, \qquad \bar{D} = \frac{1}{h} \qquad (3)$$

Foregone earnings during search of D months, at expected monthly pay w, and the burden relative to annual average formal earnings A, are

$$L = w \times D, \qquad B = \frac{L}{A} \qquad (4)$$

For household welfare, let a household have N_0 adult equivalents with consumption per adult equivalent c_0. Adding one jobless adult (1 adult equivalent, no income, household resources unchanged) gives

$$c_1 = c_0 \frac{N_0}{N_0 + 1}, \qquad \text{fall} = 1 - \frac{c_1}{c_0} = \frac{1}{N_0 + 1} \qquad (5)$$

and the household is pushed below the poverty line z if $c_1 < z$, that is, if

$$c_0 < z\left(1 + \frac{1}{N_0}\right) \qquad (6)$$

For graduate duration data reported in intervals, the average monthly hazard over an interval of k months in which the share still searching falls from S_0 to S_1 is

$$h_k = 1 - \left(\frac{S_1}{S_0}\right)^{1/k} \qquad (7)$$

and, if graduates exit at a constant rate consistent with a mean duration $\bar{D}$, the share still searching at month t is

$$S(t) = e^{-t/\bar{D}} \qquad (8)$$

The conceptual relationship underlying these indicators is

$$HW = \beta_0 + \beta_1 D + \beta_2 w + \beta_3 N + \beta_4 z + \varepsilon$$

where HW is household welfare and N household size. The model is stated for clarity and is not estimated.

3.4 Limitations

First, the study relies on published data whose collection methods the author does not control. Second, the sources refer to different years (2019, 2022, 2025 and 2026), so cross-source comparisons are indicative. Third, the CUE and Economic Survey 2026 figures were accessed through institutional summaries and press reports rather than the full publications. Fourth, the KIPPRA sample is non-probability (snowball) and its 20–24 subsample is small (about 26 respondents). Fifth, equation (3) assumes a stationary population and a constant hazard, which is a simplification; and equations (4)–(6) are accounting illustrations that assume no household savings drawdown and no income from informal work. The results should be read as orders of magnitude, not point estimates.

Empirical Evidence and Findings

4.1 How Long Do Young Kenyans Remain Unemployed?

Table 1 applies equations (1)–(3) to the age-specific data in the KNBS Quarterly Labour Force Report for January–March 2019, the most detailed official source on long-term unemployment by age that was available to the author.

Table 1: Unemployment, long-term unemployment and implied search duration by age, Kenya, Q1 2019

Age	Unemployed (U)	Long-term unemployed (LTU)	Unemp. rate (%)	LTU as % of labour force	s = LTU ÷ U (%)	Implied hazard h (per month)	Implied mean duration (months)
15–19	88,189	19,906	11.1	2.5	22.6	0.124	8.1
20–24	393,324	207,321	16.8	8.8	52.7	0.0534	18.7
25–29	286,055	179,539	9.5	6.0	62.8	0.0388	25.8
30–34	150,823	78,885	5.1	2.6	52.3	0.0540	18.5
All (15–64)	1,091,495	577,549	6.2	3.3	52.9	0.0530	18.9

Source: KNBS (2019); implied hazard and duration are the author's calculations using equations (2) and (3).

Worked example (age 20–24). Using equations (1)–(3) with $E = 1{,}953{,}135$, $U = 393{,}324$ and $LTU = 207{,}321$:

$$u = \frac{393{,}324}{1{,}953{,}135 + 393{,}324} = \frac{393{,}324}{2{,}346{,}459} = 0.1676\ (16.8\%)$$

$$s = \frac{207{,}321}{393{,}324} = 0.5271$$

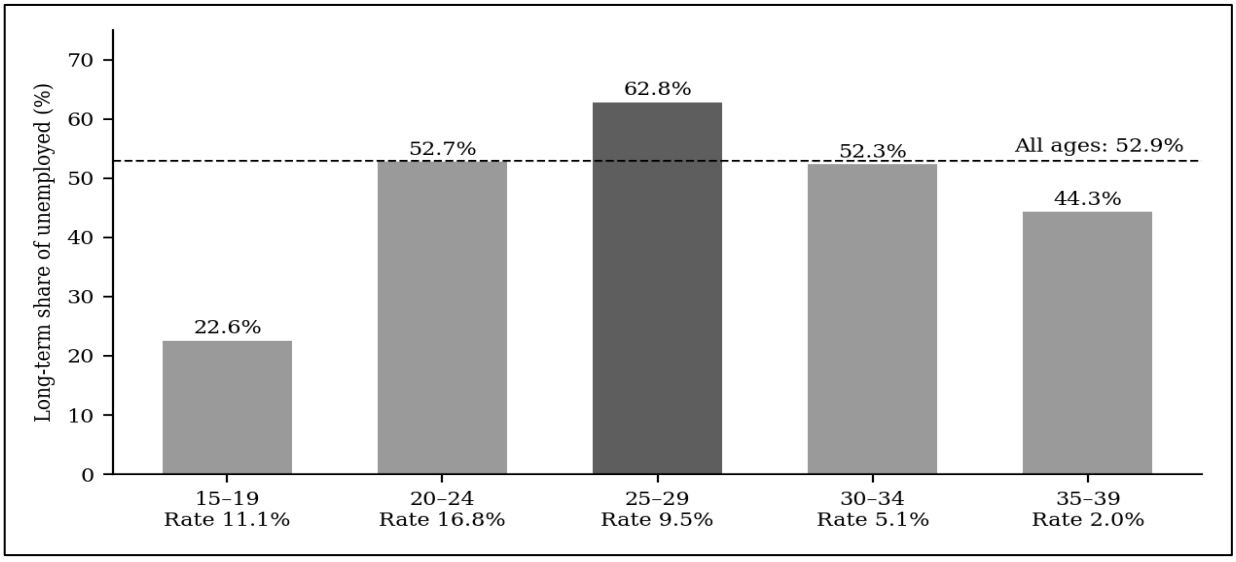
$$h = -\frac{\ln(0.5271)}{12} = \frac{0.6404}{12} = 0.0534 \text{ per month}, \qquad \bar{D} = \frac{1}{0.0534} = 18.7 \text{ months}$$

Pooling the 20–24 and 25–29 cohorts gives $s = \frac{207{,}321+179{,}539}{393{,}324+286{,}055} = \frac{386{,}860}{679{,}379} = 0.5694$, so $\bar{D} = -12/\ln(0.5694) = 21.3$ months.

Three findings stand out. First, unemployment is concentrated among the youngest adults: the rate for 20–24-year-olds (16.8 per cent) is nearly three times the national rate (6.2 per cent). Second, persistence is highest for those aged 25–29, among whom 62.8 per cent of the unemployed had searched for more than a year, against 52.7 per cent for those aged 20–24. Pooling the two cohorts, 386,860 of 679,379 unemployed young adults (56.9 per cent) were long-term unemployed, implying a mean spell of about 21 months. Third, the lower rate for 25–29-year-olds (9.5 per cent) conceals the fact that those who remain unemployed at that age are the most entrenched, which is consistent with the true duration dependence discussed by Heckman and Singer (1984). Low hazards also coincide with labour-force exclusion: 19.4 per cent of 20–24-year-olds (845,530 of 4,356,325) and 14.0 per cent of 25–29-year-olds (528,571 of 3,775,413) were neither in education, employment nor training, and the labour underutilisation rate (LU2) for 20–24-year-olds was 21.3 per cent (KNBS, 2019).

Later data show the pattern persisting. In the fourth quarter of 2022 the unemployment rate for 20–24-year-olds was 15.6 per cent (424,474 of 2,720,443) and the long-term unemployment rate for the cohort was 9.9 per cent, 1.1 percentage points higher than the 8.8 per cent recorded in 2019 (KNBS, Q4 2022). The rate for 25–29-year-olds fell to 5.9 per cent (186,560 of 3,183,615), from 10.5 per cent a year earlier, a swing that illustrates how volatile quarterly cohort rates are and why duration measures should be read alongside them.

Figure 1: Long-term unemployment as a share of total unemployment, by age, Kenya, Q1 2019



Source: KNBS (2019), Quarterly Labour Force Report Q1 2019; author's calculations from equation (2). "Rate" is each age group's unemployment rate.

Figure 1 shows the shape of persistence over the early life course. The long-term share rises sharply after the teenage years, peaks in the late twenties and falls back across the thirties. This is what the matching and scarring literature would predict for cohorts that have left education but have not yet acquired the experience that employers require (CUE, 2026; Heckman & Singer, 1984).

4.2 How Long Do Graduates Wait for a First Job?

The CUE study supplies the distribution of time to first employment for university graduates. Table 2 converts it into survival and hazard form so that it can be compared with the KNBS-based estimates.

Table 2: Time to first job among Kenyan university graduates, with survival and hazard calculations

Time to first job	Share of graduates (%)	Cumulative employed (%)	Still searching at end of interval, S(t) (%)	Conditional exit hazard (% per month)
Within 6 months	25.3	25.3	74.7	4.7
6–12 months	34.7	60.0	40.0	9.9
1–2 years	26.7	86.7	13.3	8.8
More than 2 years	13.3	100.0	–	–

Source: CUE (2026), as reported in Daily Nation (2026) and Eastleigh Voice (2026); hazards are the author's calculations.

Working. Equation (7) gives the monthly hazard in each interval of Table 2:

$$h_{0\text{–}6} = 1 - (0.747)^{1/6} = 1 - e^{-0.2917/6} = 0.047$$

$$h_{6\text{–}12} = 1 - \left(\frac{0.400}{0.747}\right)^{1/6} = 1 - e^{-0.6244/6} = 1 - 0.9012 = 0.099$$

$$h_{12\text{–}24} = 1 - \left(\frac{0.133}{0.400}\right)^{1/12} = 1 - e^{-1.1010/12} = 0.088$$

Consistency with the reported mean. Using class midpoints m_i of 3, 9 and 18 months and an assumed 30 months for the open class, with class shares p_i from Table 2, the grouped mean is

$$\bar{D} = \sum_i p_i\, m_i = 0.253(3) + 0.347(9) + 0.267(18) + 0.133(30) = 0.759 + 3.123 + 4.806 + 3.990$$

$$= 12.68 \text{ months}$$

Assuming 26 months for the open class gives 12.15 months. Both exceed the reported mean of 11.6 months. The open-class mean m_4 that would reproduce 11.6 months solves

$$0.253(3) + 0.347(9) + 0.267(18) + 0.133\, m_4 = 11.6 \;\Rightarrow\; m_4 = \frac{11.6 - 8.688}{0.133} = 21.9 \text{ months}$$

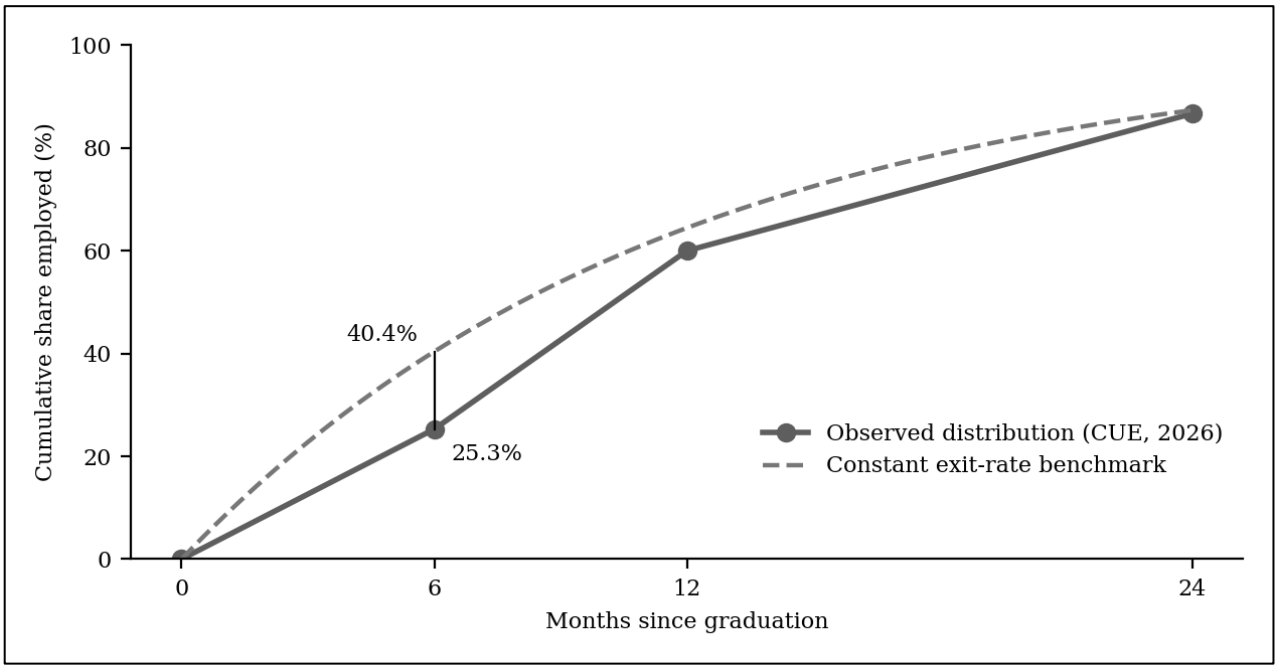
which is below the class's 24-month lower bound. The grouped data and the published mean therefore cannot both be matched with midpoints, which means that within the lower classes graduates are concentrated toward the early end of each interval. Grouped-data arithmetic of this kind is approximate, and the published mean is retained as the benchmark.

A constant-hazard benchmark. If graduates left unemployment at a constant rate consistent with the mean, equation (8) with $\bar{D} = 11.6$ gives an exit rate $1/11.6 = 0.086$ per month and

$$1 - S(6) = 1 - e^{-6/11.6} = 0.404, \qquad S(12) = e^{-12/11.6} = 0.355, \qquad S(24) = e^{-24/11.6} = 0.126$$

Only 25.3 per cent are employed within six months, a shortfall of $40.4 - 25.3 = 15.1$ percentage points against the benchmark. Conversely, the benchmark predicts that 35.5 per cent would still be searching after twelve months (observed: 40.0 per cent) and 12.6 per cent after twenty-four months (observed: 13.3 per cent). Figure 2 compares the two paths.

Figure 2: Cumulative share of graduates employed, observed and under a constant exit rate



Source: CUE (2026), as reported in Daily Nation and Eastleigh Voice (2026); benchmark is the author's calculation from equation (8): $1 - e^{-t/11.6}$.

The observed path is flatter at the start and catches up later. In the first six months the exit hazard is 4.7 per cent per month, roughly half the 9–10 per cent recorded between months 6 and 24. This is consistent with an entry delay in which new graduates have not yet cleared the experience barrier that CUE (2026) names as the leading obstacle, that is, a low offer-arrival rate early in the spell, rather than with a rising reservation wage. Two cautions apply. The published summaries do not say whether graduates still searching at the time of the study are included; if they are not, 11.6 months is a lower bound on true search duration because the longest spells are censored. And a hazard profile alone cannot separate true from spurious duration dependence without individual-level data (Heckman & Singer, 1984).

Table 3: Estimates of search duration from different sources

Source	Population and method	Estimate (months)
KNBS Q1 2019, author's calculation (equation 3)	All unemployed aged 20–24; stock of unemployed, steady-state assumption	18.7
KNBS Q1 2019, author's calculation (equation 3)	All unemployed aged 25–29	25.8
KIPPRA (2018)	Diploma and degree graduates, snowball sample, n = 304 (age 20–24: 8.6; age 25–29: 16.1)	15.2
CUE (2026)	University graduates, time to first job	11.6

The estimates differ in population, period and method and should not be averaged. They share a message: typical spells for young people run from about one year to well over a year and a half, and persistence is greatest among those in their mid-to-late twenties. The KNBS-based figures cover all education levels and are derived from spells in progress, which can differ systematically from completed first-job searches by graduates; the CUE and KIPPRA figures describe graduates only. The remainder of the paper therefore uses 11.6 months (CUE, 2026) as the central scenario, 15.2 months (KIPPRA, 2018) as a higher case and 24 months, the lower bound of the longest CUE category, as a severe case.

4.3 Earnings Foregone During Search

Equation (4) converts duration into foregone income. The central wage is w = KSh 53,556, the mean monthly pay of graduates aged 20–24 in the KIPPRA sample (Khainga & Mbithi, 2018), the cohort most likely to be seeking a first job; a higher wage of KSh 78,620 is the mean for the whole sample. The comparator A = KSh 988,200 is average annual earnings per wage employee in 2025, equal to KSh 82,350 per month (KNBS Economic Survey 2026, as reported by MyJobMag Kenya, 2026). KIPPRA wages are nominal 2018 values and the 20–24 subsample is small (about 26 respondents), so Table 4 is a scenario analysis.

Table 4: Earnings foregone during job search (KSh) and burden relative to average annual formal earnings

Search duration D (months)	w = 53,556: L	B = L ÷ A	w = 78,620: L	B = L ÷ A
11.6 (CUE, 2026)	621,250	0.63	911,992	0.92
15.2 (KIPPRA, 2018)	814,051	0.82	1,195,024	1.21
24 (severe case)	1,285,344	1.30	1,886,880	1.91

Source: author's calculations from equation (4); A = KSh 988,200.

Worked example. For the central case, using equation (4):

$$L = 53{,}556 \times 11.6 = 621{,}250, \qquad B = \frac{621{,}250}{988{,}200} = 0.63$$

Across 1,000 graduates searching for 11.6 months on average, the foregone work and earnings are

$$1{,}000 \times 11.6 = 11{,}600 \text{ person-months}, \qquad 11{,}600 \times 53{,}556 = \text{KSh } 621 \text{ million (KSh 912 million at } w = 78{,}620)$$

At the CUE average, a graduate forgoes between roughly two-thirds and nine-tenths of a year of average formal-sector pay; after two years the loss exceeds a full year's average earnings. These figures should be read as the value of the *delay* in reaching a graduate-level formal job. They are an upper-end measure for two reasons: informal income earned during search is not observed, and only 8.6 per cent of employed Kenyan youth hold formal jobs (The Star, 2026), so the probability-weighted wage is lower than the formal wage used here.

Scarring would add to this loss. The literature shows lower later wages after spells of unemployment or graduation in a weak market (Arulampalam, 2001; Kahn, 2010; Oreopoulos et al., 2012), but the author found no Kenyan estimate. As a purely hypothetical sensitivity, if a spell lowered post-search pay by a proportion p for five years (60 months), the undiscounted loss would be

$$\Delta L = w \times p \times 60$$

which for $w = 53{,}556$ equals KSh 160,668 at $p = 0.05$ and KSh 321,336 at $p = 0.10$. These values illustrate the order of magnitude and are not estimates.

4.4 Household Welfare Effects

Equations (5) and (6) show how a jobless graduate alters household consumption. The 2022 Kenya Continuous Household Survey reports overall poverty lines of KSh 4,358 (rural) and KSh 8,006 (urban) per adult equivalent per month, mean consumption of KSh 8,030 per adult equivalent, and an overall poverty headcount of 39.8 per cent (KNBS, 2022). Table 5 sets c_0 equal to the national mean for illustration.

Table 5: Effect of supporting one jobless adult on consumption per adult equivalent (KSh per month)

Adult equivalents N_0	Fall in consumption per adult equivalent (%)	c_1 when c_0 = 8,030	Poverty-entry multiple $(1 + 1 \div N_0)$	Urban threshold: $c_0 <$ 8,006$(1 + 1 \div N_0)$	Rural threshold: $c_0 <$ 4,358$(1 + 1 \div N_0)$
2	33.3	5,353	1.50	12,009	6,537
3	25.0	6,023	1.33	10,675	5,811
4	20.0	6,424	1.25	10,008	5,448
5	16.7	6,692	1.20	9,607	5,230

Source: author's calculations from equations (5) and (6); poverty lines and mean consumption from KNBS (2022).

Worked example ($N_0 = 3$). Using equations (5) and (6):

$$\text{fall} = \frac{1}{3+1} = 25\%, \qquad c_1 = 8{,}030 \times \frac{3}{4} = 6{,}022.5$$

$$\text{urban: } c_0 < 8{,}006 \times \frac{4}{3} = 10{,}675, \qquad \text{rural: } c_0 < 4{,}358 \times \frac{4}{3} = 5{,}811$$

Supporting one jobless adult cuts consumption per adult equivalent by one-sixth to one-third depending on household size. Because the national mean (8,030) is only 0.3 per cent above the urban line (8,006), since $8{,}030/8{,}006 = 1.003$, a household at the national mean in an urban area would fall below the line in every case in Table 5, while a rural household at that level would remain above its own line. The national mean mixes rural and urban households, so the thresholds are the more reliable guide: in urban areas, households with consumption up to 20 to 50 per cent above the line are pushed below it. Given a national headcount of 39.8 per cent, a large share of households sit close to the lines and are exposed.

The direct cash cost to the supporting household is shown in Table 6, valuing the job seeker's consumption at the poverty line, which is a minimum because it excludes application, transport and data costs.

Table 6: Minimum cost of supporting a job seeker at the poverty-line level of consumption (KSh)

Search duration (months)	Rural (z = 4,358)	Urban (z = 8,006)
11.6	50,553	92,870
15.2	66,242	121,691
24	104,592	192,144

Source: author's calculations (z × D).

4.5 Implications for Economic Independence

Economic independence requires a stable income that exceeds subsistence. The pay gap between formal and subsistence-level income shows why the first job matters: the KIPPRA 20–24 graduate wage of KSh 53,556 is 6.7 times the urban poverty line ($53{,}556/8{,}006 = 6.69$) and 12.3 times the rural line ($53{,}556/4{,}358 = 12.29$).

A formal job therefore carries a young person from dependence to the capacity to support others, whereas the alternative is a long wait. KNBS data show how incomplete that transition is: in Q1 2019 the employment-to-population ratio was 44.8 per cent for 20–24-year-olds and 72.2 per cent for 25–29-year-olds (students are counted in the denominator), and 19.4 per cent and 14.0 per cent of the two age groups were not in education, employment or training (KNBS, 2019).

The delay also compounds after the first job. As an illustration, if a graduate on $w = 53{,}556$ repaid 20 per cent of pay ($0.2w = 10{,}711$ per month) to the household that supported the search, the number of months needed to repay the minimum cost of an 11.6-month search is

$$T = \frac{zD}{0.2\,w}: \qquad T_{\text{rural}} = \frac{50{,}553}{10{,}711} = 4.7, \qquad T_{\text{urban}} = \frac{92{,}870}{10{,}711} = 8.7 \text{ months}$$

The 20 per cent share is an assumption chosen for illustration. Such obligations postpone saving, housing and household formation, so the cost of search extends beyond the months of unemployment itself.

4.6 Relating the Findings to Theory

The findings are consistent with search and matching theory. The low exit hazard in the first six months, at roughly half its later level, points to a low offer-arrival rate λ, which the CUE study links to the lack of work experience, and the 52.9 per cent long-term share is consistent with a labour market in which vacancies are scarce relative to seekers (θ = V ÷ U is low). The concentration of persistence among 25–29-year-olds is consistent with the hysteresis and duration-dependence mechanisms of Blanchard and Summers (1986) and Heckman and Singer (1984), although the data cannot separate true from spurious dependence. The household results show why transfers matter in the McCall model: family support raises the flow value b and lets a graduate search selectively, but it moves the cost onto households that are often close to the poverty line. Finally, the tighter the household budget constraint, the less able families are to finance education and search for the next generation, a macroeconomic channel through which individual spells feed aggregate human capital and demand.

Research Gaps, Policy Gaps, Conclusions And Policy Recommendations

5.1 Research Gaps

No national longitudinal evidence on graduate spells. In the labour-force reports reviewed, long-term unemployment is tabulated by age rather than by education level, and graduate duration figures come from one-off studies, one of which uses a non-probability sample (Khainga & Mbithi, 2018). Completed and still-running spells therefore cannot be separated, and the CUE mean may understate true duration.

No link from search duration to household outcomes. The sources reviewed contain no Kenyan study that follows job seekers and their households to measure consumption, transfers or poverty transitions during search. Table 5 is therefore an accounting illustration that surveys should test.

No Kenyan estimate of scarring. Evidence on lasting wage penalties comes from other economies (Arulampalam, 2001; Kahn, 2010; Oreopoulos et al., 2012; Schwandt & von Wachter, 2019). Whether long spells reduce later pay in Kenya remains unmeasured.

Limited disaggregation. KIPPRA reports shorter search among women (about 15 months) than men (about 20 months) and among 20–24-year-olds than older graduates, but its sample is not representative, and county-level patterns are not available.

5.2 Policy Gaps

The experience barrier. CUE (2026) identifies lack of work experience as the leading obstacle to first employment and recommends stronger internships, industrial attachments and work-integrated learning. The low

early exit hazard in Table 2 suggests that the barrier operates at the start of the spell, when it is hardest for households to absorb.

Too few formal vacancies. Wage employment grew by about 110,000 jobs (3.4 per cent) in 2025 while informal activity supplied about 87 per cent of new jobs (The Kenya Times, 2026; The Standard, 2026). Policy that counts jobs without distinguishing formal graduate-level vacancies leaves the matching shortfall in place.

Households act as the insurer. To the author's knowledge, there is no established income-support arrangement for first-time job seekers, so the costs in Tables 5 and 6 fall on families, including those near the poverty line.

Weak labour-market information and networks. CUE (2026) lists insufficient labour-market information and inadequate professional networks among the barriers. Without reliable vacancy and wage information, graduates cannot calibrate reservation wages or search effort.

CONCLUSIONS

This paper set out to quantify the hidden cost of graduate unemployment in Kenya through search duration. Four conclusions follow from the evidence assembled. First, search is long: 52.9 per cent of unemployed Kenyans had been searching for more than a year in Q1 2019, rising to 62.8 per cent among 25–29-year-olds, and graduates wait 11.6 months on average for a first job, with four in ten waiting longer than a year. Second, search is costly: at KIPPRA graduate pay levels, 11.6 months of delay forgoes KSh 0.62–0.91 million, 63–92 per cent of average annual formal-sector earnings. Third, households absorb the cost: one jobless adult lowers consumption per adult equivalent by 17–33 per cent and can push households that are 20–50 per cent above the poverty line into poverty. Fourth, independence is delayed: a formal graduate wage is many times the poverty line, so every month of delay postpones the point at which a young person can support themselves, repay family support and save. Economic growth that is not matched by formal, graduate-level job creation and a faster school-to-work transition therefore transmits its costs to households rather than removing them. The results are orders of magnitude based on secondary data, and they should be refined with the longitudinal evidence recommended below.

Policy Recommendations

1. **Measure duration properly.** KNBS should publish long-term unemployment and search duration by education level and county in its quarterly reports, and CUE, KNBS and KIPPRA should establish a national graduate tracer panel that follows cohorts from graduation into employment and records spells, earnings and household support.

2. **Close the experience gap.** Universities and employers should expand structured internships, attachments and work-integrated learning, as recommended by CUE (2026) and KIPPRA (Khainga & Mbithi, 2018), with the aim of making work experience a part of the degree rather than a requirement after it.

3. **Raise formal job creation.** Macroeconomic and investment policy should be judged by formal, graduate-level jobs created, not only total employment, and by an enabling environment for private-sector expansion, which KIPPRA found to be the largest absorber of graduates.

4. **Pilot transition support and evaluate it.** Short-term job-search support, such as transport and data allowances or subsidised first-job placements, should be piloted for first-time job seekers from low-income households and rigorously evaluated for cost, effect on duration and displacement before any scale-up.

5. **Improve labour-market information.** Public vacancy and wage information, career guidance and employer–graduate networks should be strengthened so that search is better targeted and reservation wages better calibrated.

6. **Support productive self-employment.** Because most new jobs are informal, skills and credit support for graduates entering self-employment should focus on raising earnings to levels that allow household independence, with attention to repayment risk.

APPENDIX A: NOTATION

Symbol	Meaning
U, E, LTU	Number of unemployed, employed and long-term unemployed (12 months or more)
u, s	Unemployment rate; long-term share of the unemployed
$h, \bar{D}$	Monthly exit hazard; mean search duration in months
$S(t)$	Share of job seekers still searching at month t
w, D	Expected monthly pay (KSh); search duration (months)
L, A, B	Earnings foregone (KSh); average annual formal earnings (KSh 988,200); burden L/A
N_0, c_0, c_1	Adult equivalents in the household; consumption per adult equivalent before and after supporting a jobless adult
z	Poverty line per adult equivalent per month (KSh 4,358 rural; KSh 8,006 urban)
λ, F, b, r, w_R	Offer arrival rate; wage offer distribution; flow value of unemployment; discount rate; reservation wage
U, V, θ	Job seekers, vacancies and labour-market tightness V/U (matching model)

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