

# We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900

Open access books available

186,000

International authors and editors

200M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index  
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?  
Contact [book.department@intechopen.com](mailto:book.department@intechopen.com)

Numbers displayed above are based on latest data collected.  
For more information visit [www.intechopen.com](http://www.intechopen.com)



# A Gender Analysis of the Determinants of Youth Unemployment in Côte d'Ivoire

*Ibrahima Sy and Akrassi Kouakou Evrard Kouame*

## Abstract

The purpose of this article is to improve knowledge and understanding of the determinants of unemployment duration by gender in Côte d'Ivoire. One of the central questions on this issue is to what extent the personal characteristics of jobseekers affect their exit from unemployment. In this sense, we apply a proportional risk model with heterogeneity correction of Weibull (2004), applied to data from the Household Employment Survey in Côte d'Ivoire (EEMCI) that was conducted in 2012 by AGEPE. The results of the study reveal that young men are much more likely to exit unemployment than young women. Even if the results show a negative relationship between high level of education and unemployment, the high representation of women on the unemployment rate remains attributable to their very low level of education and the weight of tradition relegating the role of the woman, as a matter of priority, to housework.

**Keywords:** long-term unemployment, young women, duration models, Côte d'Ivoire

## 1. Introduction

Cited as an example for its economic prosperity and its political stability at the beginning of independence until the end of the 1970s, Côte d'Ivoire experienced from 1980 a succession of events that will slow down its economic growth.

Political instability in the country since the late 1990s, which peaked with the post-election crisis of 2011, continues to leave a legacy, including youth unemployment. The latter has reached disconcerting proportions in a context of widespread poverty.

If the unemployment rate recorded in 2012, in Côte d'Ivoire, according to international criteria is 8.2%, this figure is revised upwards by the Ivorian government that broadens the criteria taking into account the realities of the country. This rate would be close to 25%. The unemployed would then be about 6.5 million people, a figure close to the 7 million announced in 2014 by the ILO (International Labor Office). Despite its predominantly young population and average economic growth of 9% per year since 2012, the labor market is characterized by increased long-term unemployment. Household Living Standards Surveys (ENVs) report an average duration of unemployment of 55 months, 53 months and 46.7 months respectively in 1998, 2002 and 2008. In addition, employment survey reports

[1, 2]<sup>1</sup> note that the unemployed, looking for a job, are respectively 67.8 months and 47.7 months on average, or about 4 years. Almost 76% of the unemployed are long-term unemployed.

Long-term unemployment, especially for first-time job seekers, mainly affects young people. In 2012, their unemployment duration was 58.9 months, just under 5 years. According to gender, young women leave unemployment after a period of 5.12 years against 4.16 years for young men. Among first-time claimants, they take 7 months more than young men to find a job. These figures show the lack of job opportunities for young people, on the one hand, and on the other hand, the difficulties young women face in entering the labor market.

Nevertheless, several measures in the fight against unemployment have been implemented. These measures began in 1985 with the implementation of the return to land policy. This failed because of its inconsistency with the theory of development as developed by Harris and Todaro [3]. The surplus of the rural labor force tends to migrate to the cities to feed the industrial labor force, hence the increased unemployment in urban areas.

In 1991, the Hiring Assistance Program was initiated to support young graduates, especially in urban areas, in order to inhibit the effect of previous initiatives. In the same period, the Absorption Program for Out-of-School Young People (PAJD) was launched to provide support to out-of-school youth. Other initiatives have been undertaken whose aim is to fight against unemployment, insecurity, poverty and exclusion by promoting the integration of young people. We can mention among others, the programs conducted by the Youth Employment Agency (AEJ) ex-Agency Study and Promotion of Employment (AGEPE) [2, 4]: the Employment

		Woman	Man	Ensemble
Age group	14–24 years old	12.00	7.71	9.65
	25–35 years old	12.41	10.02	12.04
	36 years old and +	5.54	3.71	4.43
Middle of residence	Abidjan	23.02	16.56	19.50
	Other urban	13.83	8.22	10.70
	Rural	4.95	2.73	3.72
Level of education	No	5.97	2.72	4.39
	Primary	12.82	5.36	8.60
	Secondary	21.24	12.51	15.24
	Superior	40.34	19.57	24.76
Marital status	Single	16.07	11.27	13.10
	Married	8.23	3.47	5.67
	Widower/divorced	5.65	2.51	4.70
Global		10.34	6.5	8.2

Source: Authors' calculations based on 2012 AGEPE data.

**Table 1.**  
Youth unemployment rate by gender in Côte d'Ivoire (in%).

<sup>1</sup> ENSETE: Enquête nationale sur la situation de l'emploi et du travail des enfants [2].

Assistance Program (EAP); project to support the economic treatment of unemployment (PATEC); Special Program for the Integration of Women (PSIF). In addition, the priority areas of youth employment in the National Development Plan (PND 12–15, 16–20) show the political will to provide sustainable solutions to youth unemployment.

However, these efforts have not been successful. The relatively high unemployment rate in 2012 hides disparities in terms of place of residence, age, sex and level of education. Unemployment is higher in urban areas and affects many more young people (85% of the unemployed) and especially graduates. In Abidjan, the economic capital, for example, the unemployment rate of the labor force was 19.5, while the unemployment rate of 14–24-year-olds was 9.65% against 12.04% for 25–35 years (see **Table 1** in the appendix).

Therefore, it seems logical for Côte d'Ivoire that the implementation of appropriate policies in favor of the reduction of unemployment requires a better understanding of the factors likely to influence the occurrence of the phenomenon, particularly with regard to its duration. This work is part of this perspective. It tries to highlight the factors determining the duration of youth unemployment in Côte d'Ivoire by gender.

Section 2 describes the various works done in this direction. Section 3 presents the methodological approach used. The resulting econometric results and analyzes are presented in Section 4.

## **2. The teachings of the literature review**

Long-term unemployment, or the persistence of unemployment, reflects what economists call the hysteresis effects of unemployment. The study of the length and frequency of unemployment is now central to the analysis of the functioning of the labor market. It is indeed a cross-cutting theme that can be found in different theories of nature. Foremost among these are job search approaches [5–8], matching models, efficiency wages and labor market segmentation approaches [9, 10]. The relevance of this topic mobilizes several researchers to look at a microeconomic level. Many studies have tried to assess the explanatory factors of the phenomenon, for example, by studying the effects of individual characteristics (demographic, socio-economic and seniority unemployed), the economic situation, the rules of unemployment compensation (conditions of access, replacement rates and duration of compensation) and labor flows in the labor market [11], which are the key empirical facts that require a revision of the paradigm Walrassian [12]. This theoretical revision presupposes a rigorous description of the phenomenon and began with the work of Lancaster [13]. Their first estimates were made directly on the duration of unemployment or on the instantaneous rate of out of unemployment by postulating most often a particular specification. This type of study was gradually replaced by a structural approach explicitly modeling individual behaviors and based on “job search” models [14–20]. Most of these studies focused on the United States in view of the availability of data.

In France, work on this theme started a little later. A first group of works [21, 22] focused the analysis on the duration of youth unemployment by taking as a frame of reference the job search model. A second group of works [23] then studied, without direct reference to the microeconomic theory, unemployed seniority.

As a result of this work, several studies enriching the understanding of the duration of unemployment have developed in developed countries with various

conclusions. Fougère [24] highlights the individual characteristics on which employers base their hiring selection strategies, particularly in periods of high unemployment in the case of France. His study is devoted to the influence of the economic situation on the individual durations of unemployment. The individual characteristics enumerated in his study are demographic (sex, age, nationality and family status) and socio-economic (initial training, qualification and previous career path). In the same vein, Bonnal and Fougère [25] reached the same conclusions with the integration of a new socio-economic variable (socioprofessional category of the individual). The work of Joutard and Werquin [26] enriches the understanding by including in the analysis of the individual determinants of duration the distinction between the exit of unemployment on a precarious job and that on a stable job. The results highlight the difference between individual factors and work experience according to the type of job found (stable or precarious). The work of Bourdet and Persson [27], based on a comparative analysis between France and Sweden, emphasizes the need to put in place appropriate policies to absorb youth unemployment fairly quickly. According to this study, the employment policy for young people became permanent in France while it was able to return to Sweden at its level of fifteen years ago (affecting about 4% of the young working population). According to him, this situation is due to the fact that in France the measures were taken late.

The growth and persistence of unemployment are worrying because of the change in its physiognomy, which highlights the duality between graduates and non-graduates [28] and the issue of the exit from unemployment with unemployed seniority [29]. The work of Lê et al. [30] leads to an increase in the long-term unemployment rate between 2008 and 2013 among the most fragile asset categories: workers, employees, young people, people without diplomas, single parents, inhabitants of sensitive urban areas and immigrants. In 2013, for example, people without a diploma have a long-term unemployment risk that is twice as high as those with a level of 2 years or more.

On the other hand, other studies have pointed out that the effect of time spent on unemployment on the risk of leaving unemployment is explained by the heterogeneous nature of the cohorts of entries into unemployment. According to Di Paola and Moullet [31], the non-taking into account of the heterogeneity existing between individuals leads to a negative temporal dependence of the risk of exit from unemployment. This phenomenon of negative time dependence of risk also underlined by Heckman and Singer [14] is better known under the name of “movers-stayers.” It shows the importance of controlling individual heterogeneity in understanding the phenomenon.

Some studies on long-term unemployment have been observed in Africa. The first study is done by Lachaud [32]. According to this author, the mode of access to the labor market seems to be a major determinant of situations of social exclusion, and the influence of this factor goes far beyond what could be called the inherent “logical exclusion” of the destabilization of African economies. Guessan [33] indicates that Ivorian unemployed people in Côte d’Ivoire are less active in job search than non-Ivorian unemployed people and are more competitive. In addition, the study points out that the unemployment rate and the density of the municipality of residence of the unemployed influence the intensity of the job search and the choice of job search methods. Chort et al. [34] conclude for Senegal that apprenticeship is a decisive factor in entry into the labor market, based on the competing risk-entry duration models. By comparing the trajectories of former apprentices with those of non-apprentices, they conclude that the role of entry to apprenticeship is important for subsequent social and occupational integration.



While in Côte d'Ivoire, the high rate of unemployment may be attributable, on the one hand, to the inadequacy of jobs in the modern sector<sup>2</sup> and, on the other hand, to the fact that a large proportion of those wishing to work are not seeking a job, and the duration of unemployment can be explained by other additional parameters related to the personal characteristics of the individual. To our knowledge, no study has addressed the determinants of the duration of unemployment duration by integrating an econometric analysis for the case of Côte d'Ivoire. In view of the above, we will attempt to conduct this study based on the AGPEE literature and data in 2012.

### 3. Methodology and data source

Our econometric study of the links between the individual characteristics of young people and the duration of unemployment joins the paradigm of the demand for labor [35].<sup>3</sup> The heterogeneity of individual characteristics makes it possible to assess the correlation existing between jobseekers and the difficulty of getting out of unemployment. From a methodological point of view, our analysis is enriched by the integration of a certain number of explanatory variables.

#### 3.1 Econometric model of duration

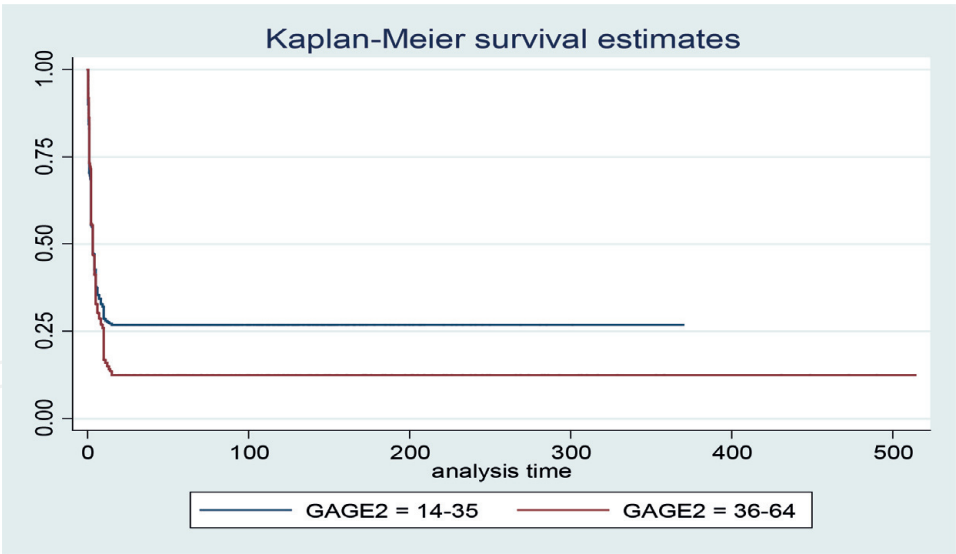
The objective being to estimate the probability of a young person finding a job according to the number of months spent unemployed, several econometric models could be useful: for example, a probit or a Tobit. The use of a duration model essentially resides in the fact that it allows to keep in the sample individuals still unemployed at the time of the survey. This type of model is necessary, especially to take into account the censored unemployment episodes. One of the difficulties encountered with the estimation by a duration model is to choose, from all the possible options, a particular description of the probability distribution of the duration variable, having implications on the form of the risk function. A common prediction of empirically observed unemployment durations is that they are characterized by a negative time dependence,<sup>4</sup> leading to the rejection of constant random functions, such as that associated with the exponential model [36]. For this type of analysis, the Weibull model is the most appropriate. This parametric estimation method is widely used [37, 38] because of, on the one hand, the relatively simple form of its survival function and, on the other hand, it belongs both to the family of so-called accelerated life models and so-called proportional hazards models. In addition, the Weibull model can estimate a monotonous chance increasing, monotonous decreasing or constant. A first, primarily descriptive, approach to the durations of our sample using the non-parametric Kaplan-Meier estimator encourages

---

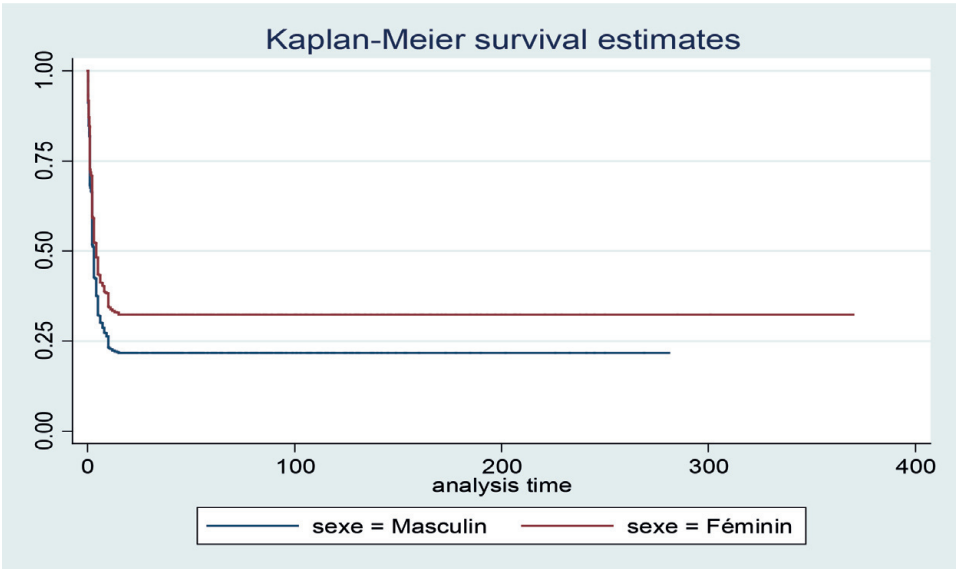
<sup>2</sup> The distribution of jobs in Côte d'Ivoire is divided into three sectors: the modern sector characterized by modern production technology, a skilled and salaried workforce and compliance with labor regulations. The informal rural sector is identified by microenterprises often confused with the family unit, a rudimentary production technique and the non-respect of labor regulations.

<sup>3</sup> Mériaux [35] calls the "labor demand paradigm" as a guiding principle of an observational program. Rather than focusing on the exchange of facts that occur on the market, priority is given to the different characteristics of each individual that could be an asset or a constraint to the job search.

<sup>4</sup> Allowing to estimate the chances that an individual leaves unemployment, or any other state of the labor market, at a given moment, knowing that he was unemployed until the previous moment (function of risk).



**Figure 1.** Survival function by age group (labor force) obtained by non-parametric estimate of Kaplan-Meier. Source: Authors' calculations based on 2012 AGEPE data.



**Figure 2.** Youth survival function by sex obtained from non-parametric Kaplan-Meier estimation. Source: Authors' calculations based on 2012 AGEPE data.

us to reject the exponential model (constant randomness) since it results in a decreasing monotonous distribution of durations, that is to say, a growing chance (see **Figures 1 and 2**). Anything that reinforces our choice of a Weibull model.

Let us note:  $T$  is the duration of unemployment;  $T^*$  is the random unemployment duration of an uncensored individual;  $c$  is the censored unemployment duration of an individual who has still not found a job at the time of the survey and censored, an indicator variable equal to 1 if the observation is censored and 0 otherwise.

$$\begin{cases} T = c, \text{ if } censored = 1. \\ T = T^*, \text{ otherwise.} \end{cases} \quad (1)$$

In addition, the model assumes that individuals whose unemployment durations are censored are representatives of all individuals whose unemployment durations

are at least equal to  $c$ . If we consider  $c$  as a random variable, then  $c$  must be independent of  $T^*$  after taking into account the other factors explaining the duration of unemployment. The distribution of probabilities of unemployment duration  $T$  can be specified by the following distribution function:

$$F(t) = \text{Prob}(T < t) \quad (2)$$

$F(t)$  then represents the probability that an unemployment duration  $T$  lasts less than  $t$  periods. The corresponding density function is:

$$f(t) = \frac{dF(t)}{dt} \quad (3)$$

By  $f(t)dt$ , we then have the probability that the unemployment duration  $T$  will end between  $t$  and  $(t+dt)$  periods. These functions (distribution and density) make it possible to determine the survival function  $S(t)$  and the function  $\lambda(t)$  with:

$$\begin{aligned} \lambda(t) &= \lim_{\Delta t \rightarrow 0} \frac{\text{Prob}(t \leq T \leq t + \Delta t | T \geq t)}{\Delta t} \\ &= \lim_{\Delta t \rightarrow 0} \frac{F(t + \Delta t) - F(t)}{\Delta t S(t)} = \frac{f(t)}{S(t)} \end{aligned} \quad (4)$$

Or

$$\lambda(t) = \frac{f(t)}{S(t)} = \frac{dF(t)/dt}{S(t)} = \frac{-dS(t)/dt}{S(t)} = -\frac{d \ln S(t)}{dt} \quad (5)$$

And so that:

$$f(t) = S(t)\lambda(t) \quad (6)$$

Generally, the identification of the factors that affect the probability of exit from unemployment to employment is analyzed using the risk functions. We subscribe to this logic. Moreover, Steiner [39] emphasizes that risk functions can be interpreted as reduced forms of the basic job search model as elaborated by McCall [40].

### 3.2 Estimation method

The duration models lend themselves to various types of estimation. The approach chosen for the estimates is the parametric method and, more specifically, proportional hazard models [41]. Suppose  $t$  follows a Weibull distribution, noted:

$$f(t) = \lambda p (\lambda t)^{p-1} \quad (7)$$

where  $t$  is an embodiment of  $T$ ;  $\lambda$  is the risk function and  $p$  is a scale parameter. These parameters ( $\lambda$  and  $p$ ) can be estimated by the maximum likelihood method.

The formulated likelihood function is the sum of the likelihood functions of uncensored and censored observations such that:

$$\ln L(\beta, \alpha | data) = \sum_{i=1}^n \left[ \delta_i \left( \frac{\ln t_i - X_i' \beta}{\sigma} - \ln \sigma \right) - \exp \left( \frac{\ln t_i - X_i' \beta}{\sigma} \right) \right] \quad (8)$$



where  $\sigma=1/p$ ;  $\delta_i=1$  for individuals having completed their period of unemployment;  $\delta_i=0$  for those still unemployed and  $X_i'$  is the vector of the explanatory variables

As specified, the model may suffer from a heterogeneity problem. This problem can be considered in the duration models as the main result of an incomplete specification. It is usually due to the fact that the observed process may have started at different points in the calendar for the different individuals in the sample. To take into account this heterogeneity, a random element  $v_i$  summarizing heterogeneity not taken into account in the model is introduced in the parametric model<sup>5</sup> and the law of duration is rewritten conditionally to this term.

If there is apparently no general theorem in the choice of the distribution of this term, the most recurrent laws are the Gamma law and the inverse-Gaussian law (Inverse Gaussian).<sup>6</sup> The Gamma distribution is frequently used in this type of analysis because the value of  $\theta$  is higher with this specification. Thus, in the case where  $v_i$  follows a Gamma distribution of mean 1 and variance  $\theta$ , the heterogeneity test is to check if the parameter  $\theta$  is statistically different from zero.

Data from the study came from the Employment Survey of Households in Côte d'Ivoire (EEMCI) conducted in 2012 by the Agency for Studies and Promotion of Employment (AGEPE), a structure under the supervision of the Ministry of Employment. The purpose of the survey was to update the employment indicators, with a view to constitute a reference for the evaluation of current initiatives in the field of employment promotion.

Variables	Young man		Young woman	
	Average	Standard deviation	Average	Standard deviation
<i>Marital status</i>				
Single	0.519	0.492	0.387	0.487
Married	0.403	0.491	0.598	0.490
Widower/divorced	0.005	0.750	0.151	0.122
<i>Middle of residence</i>				
Abidjan	0.190	0.392	0.199	0.400
Other urban	0.226	0.419	0.229	0.420
Rural	0.583	0.493	0.571	0.494
<i>Level of education</i>				
No	0.440	0.496	0.574	0.494
Primary	0.276	0.447	0.226	0.442
Secondary	0.223	0.416	0.130	0.335
Superior	0.061	0.240	0.300	0.170
<i>Groupe d'âges</i>				
Young	0.350	0.477	0.420	0.493
Young adult	0.651	0.477	0.579	0.493

Source: Authors' calculations based on 2012 AGEPE data.

**Table 2.**  
Descriptive statistics of model varia.

<sup>5</sup> The strictly non-parametric approach of the Kaplan-Meier estimator is robust to this problem.

<sup>6</sup> Finding done by Jenkins [42].

EEMCI provides information on the socio-economic and demographic characteristics of 11,600 households, or 49,590 individuals. Among them, there are 28,875 individuals of working age or 58.23%. The base sample comprises 19,115 individuals aged 14–35 years. This young population represents 66.20% of people of working age and is composed as follows: 61.56% of employed persons (11,767 individuals); 7.30% (1394 young people) unemployed and 31.14% inactive (5954 young people).

### 3.3 Model variables

The dependent variable of the model is the duration of unemployment, continuous variable expressed in months. From the various works cited above and according to the variables available in the database, we retain these socio-demographic variables (age, sex, place of residence, marital status and level of education) as explanatory variables. Each of the variables has several modalities that are supposed to have different effects on the duration of unemployment (see **Table 2** in the appendix).

It is expected that a married woman would tend to stay in unemployment longer than an unmarried woman by the presence of a spouse who is able to support the family. This situation is accentuated when there are dependent children. In addition, young women living in urban areas should experience longer unemployment durations. In addition, more educated individuals would be less likely to be in a state of prolonged unemployment.

## 4. Econometric results

At the level of the non-parametric approach, a first analysis is made by distinguishing according to the age group in order to capture the specificities that could exist between young people and adults. The parametric approach is discussed later.

### 4.1 Non-parametric approach

Kaplan-Meier estimators of the non-parametric approach for survival functions by age group show that adult unemployment durations are generally shorter than those of youth (see **Figure 1**). It also appears that the unemployment durations of young women are longer than those of young men (see **Figure 2**). Their survival function above that of young men confirms their difficulties in entering the labor market.

If we combine the age criterion with that of gender, we can, in relation to the level of the rates, constitute two groups of young people. The youngest (14–24 years old), and particularly young women, can be classified as the most group. Young men over the age of 24 are significantly less exposed to unemployment than those in the first group.

### 4.2 Parametric approach

**Table 3** (annexed) presents the results of risk function estimates taking into account the heterogeneity between individuals. It traces the explanatory factors of the duration of unemployment among young people by sex.

Among the factors that expose workers to long-term unemployment, the analyses tend to highlight individual characteristics. Among these characteristics, it is common to distinguish “demographic” individual characteristics (sex, age and

Explanatory variables	Woman	Man	Ensemble
<b>Other characteristics</b>			
Man	–	–	1.591 (4.71)***
14–24 years old	1.266 (1.41)	1.190 (1.22)	1.240 (1.99)**
<b>Level of education</b>			
No	3.050 (3.36)***	2.070 (3.42)***	2.347 (4.69)***
Primary	1.673 (1.57)	1.314 (1.29)	1.438 (0.04)**
Secondary	1.150 (1.45)	0.231 (0.60)	1.144 (0.75)
<b>Middle of residence</b>			
Abidjan	0.836 (–0.93)*	1.020 (0.14)	0.950 (–0.44)
Other urban	0.684 (–1.34)	0.908 (–0.63)	0.823 (–1.61)
Rural	Ref.	Ref.	Ref.
<b>Marital status</b>			
Single	1.451 (0.73)	1.436 (0.49)	1.150 (0.35)
Married	1.083 (0.016)	1.822 (0.81)	1.169 (0.40)
Widower/divorced	Ref.	Ref.	Ref.
<b>Constante</b>	0.280 (–2.12)**	0.270 (–1.73)*	0.267 (–3.09)***
$Ln(p)$	0.482 (10.52)***	0.454 (0.454)***	0.461 (15.95)***
$Ln(\theta)$	1.320 (12.48)***	1.360 (23.28)***	1.579 (36.32)***
$p$	2.3368	1.575	1.586
$\sigma=1/p$	0.61746	0.635	0.630
$\theta$	6.169488	0.227	4.855
<b>Number of observations</b>	<b>2 368</b>	<b>2 530</b>	<b>4 898</b>
$Wald\ chi^2(01)$	1023.86	1701.12	2100.95
$Prob > \chi^2$	0.000	0.000	0.000
$Log\ likelihood$	–4243.682	–7246	–8923

Source: Authors’ calculations based on 2012 AGEPE data.

\*Significant at 10%.

\*\*Significant at 5%.

\*\*\*Significant at 1%.

**Table 3.**  
Determinants of the duration of youth unemployment by gender Weibull with correction of heterogeneity (Gamma).

family situation) and individual socio-economic characteristics (initial education and level of education) [43].

An examination of the results of the estimates for the entire young population reveals that young men are more likely to leave unemployment than young women. The positive significance of the coefficient of this variable confirms those obtained with the non-parametric approach. Unemployed young women aged 14–24 have the same characteristics as young men in the same age group, with the difference that young women enter the labor market earlier. Their greater difficulty in accessing the labor market may be due to their low level of education and the weight of tradition relegating the role of women to household chores.

If young people are unemployed longer compared to adults (see **Figure 1**), the results highlight particularities within the young population. It should also be noted

that belonging to the group of individuals aged 14–24 rather than being a young adult (25–35 years old) increases the chances of getting out of unemployment.

This indicates that in Côte d'Ivoire, adults are leaving unemployment more quickly. They “survive” less time in the unemployment state. The age of the end of studies being around 24 years (short cycle of vocational training type), a possible explanation would be that at the exit of the education system, these young people have a strong employability.

Beyond age, it also seems that long-term unemployment would affect more young graduates. However, the results obtained with the level of education contrast this reasoning. It appears that it is young people with no education who are less likely to be unemployed.

This gives an idea of the type and quality of the job, regardless of the sex of the applicant. Thus, young women or young men with no education are those who have a high probability of getting out of unemployment relatively quickly. One possible explanation lies in the relocation or closure of many companies caused by the military-political crisis unleashed in 2002. What fuels the precarious job of workers without expertise or professional training? The informal sector, especially domestic ones, occupies the majority of young people. The formal private sector offers only a small proportion of jobs [44]. This situation is the result of a strong mismatch between training and employment. Policies in favor of the decline in unemployment would be more effective by favoring a revision of the Ivorian education system that would integrate the concerns of businesses and professions of the future (Table 4).

Other factors may play in favor of long-term unemployment, sometimes just as important: this is the fact of residing in the economic capital supposed to reduce the probability of leaving unemployment. However, among young women, residing in Abidjan increases the chances of staying longer unemployed. The economic capital is therefore an area with fewer job opportunities for them. Among young men,

		Woman	Man	Ensemble
Age group	14–24 years	56.16	43.84	100.0
	25–35 years	60.51	39.49	100.0
	36 years and +	48.91	51.09	100.0
Place of residence	Abidjan	53.71	46.29	100.0
	Other urban areas	57.17	42.83	100.0
	Rural areas	59.15	40.85	100.0
Educational level	None	69.58	30.42	100.0
	Elementary school	64.71	35.29	100.0
	High school	43.64	56.36	100.0
	Higher education	40.69	59.31	100.0
Marital status	Single	46.63	53.37	100.0
	Married	66.99	33.01	100.0
	Widowed/divorced	83.64	16.36	100.0
Ensemble		56.18	43.82	100.0

Source: Authors' calculations based on 2012 AGEPE data.

**Table 4.**  
*Proportion of unemployed youth by gender (%).*

there are no statistically significant differences in the chances of getting out of unemployment between those living in rural areas and those living in urban areas.

As we pointed out in Section 1, several initiatives have been undertaken to combat unemployment in Côte d'Ivoire. But to our knowledge, there are still no accompanying measures geared specifically to the long-term unemployed. This practice could significantly reduce the duration of long-term unemployment.

## **5. Discussion**

The study highlights the importance of educational attainment in explaining the duration of youth unemployment. Indeed, the fact that young women are unemployed for long periods of time shows that they have low levels of education compared to young men. Several reasons can be given to explain this result. We can mention: the persistent reluctance in the schooling of the girl child in certain regions of the country; the early exits of the girl child from the educational system for household support, because of the weight of tradition relegating the role of the woman, primarily to household chores or to forced marriage and school pregnancies.

Policies for free schooling, especially for girls, should be evaluated and reoriented so that they can achieve their objectives. This new orientation could concern the complete care of the girl up to secondary school. In addition, the “zero school pregnancy” policy should be accentuated. In the short term, a policy to support women's entrepreneurship through a series of training courses and easy access to finance could be a real lever to reduce unemployment among young girls in Côte d'Ivoire. These policies should also integrate the needs of parents through incentives.

## **6. Conclusion**

The purpose of this contribution was to analyze the determinants of the duration of youth unemployment in Côte d'Ivoire. Specifically, the author wanted to capture the particularities of long-term youth unemployment by gender. The proportional hazard model with heterogeneity correction applied to data from the Household Employment Survey in Côte d'Ivoire (EEMCI) results in the following results. Young men are more likely to leave unemployment than young women. The low level of education of these and the inadequacy of training in relation to the needs of the labor market largely justify this situation. In addition to educational level, the place of residence also determines the duration of unemployment among young women.

This work could be enriched by a spatial analysis that would highlight the most disadvantaged localities in terms of workforce absorption capacity.

However, this may be possible only if future surveys provide information at the disaggregated level (departments or communes). Also, to enumerate and characterize the long-term unemployed are certainly essential steps, but must be completed by examining the way out of long-term unemployment for an effective policy implementation in Côte d'Ivoire.



IntechOpen

## Author details

Ibrahima Sy<sup>1\*</sup> and Akrassi Kouakou Evrard Kouame<sup>2</sup>

1 Laboratoire d'Économie Appliquée au Développement (LEAD), University in Toulon (UTLN), France

2 Université Félix Houphouët Boigny, Abidjan, Côte d'Ivoire

\*Address all correspondence to: [himrasy@yahoo.fr](mailto:himrasy@yahoo.fr)

## IntechOpen

© 2020 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. 

## References

- [1] Agepe. Situation de l'emploi en Côte d'Ivoire en 2012. Rapport de synthèse. Abidjan: Agence d'études et de promotion de l'emploi (Agepe); 2013. Available from: <http://directiongeneralemploi.ci/wp-content/uploads/2016/09/Situation-de-lemploi-en-2012.pdf>
- [2] Ensete. Ministère du Plan et du Développement. Enquête nationale sur la situation de l'emploi et du travail des enfants (Ensete 2013). Rapport descriptif sur le travail des enfants. Abidjan; 2013. Available from: [http://www.ins.ci/n/documents/travail\\_enfant/Enquete%20nationale%202013.pdf](http://www.ins.ci/n/documents/travail_enfant/Enquete%20nationale%202013.pdf)
- [3] Harris JR, Todaro MP. Migration, unemployment and development: A two-sector analysis. *The American Economic Review*. 1970;**60**(1):126-142
- [4] AGEPE. Enquête nationale sur la situation de l'emploi et du travail des enfants (ENSETÉ 2013): Rapport descriptif sur la situation de l'emploi, août. 2014
- [5] Bull C, Jovanovic B. Demand-shift versus mismatch as causes of labour mobility. *Review of Economic Studies*. 1988;**55**:169-176
- [6] Burdett K, Kiefer NM, Mortensen DT, Neumann GR. Earnings, unemployment, and the allocation of time over time. *The Review of Economic Studies*. 1984;**51**(4):559-578.
- [7] Deere DR. Labor turnover, job-specific skills and efficiency in a search model. *Quarterly Journal of Economics*. 1987;**81**:5-833
- [8] Stigler GJ. Information in the labor market. *Journal of Political Economy*. 1962;**70**(5, Part 2):94-105. 24(1-2), pp. 63-132
- [9] Cain GG. The challenge of segmented labor market theories to orthodox theory: a survey. *Journal of Economic Literature*. 1976;**14**(4): 1215-1257
- [10] Doeringer P, Piore MJ. *Internal Labor Markets and Manpower Adjustment*. New York: DC Heath and Company; 1971
- [11] Fortin B, Fougère D, Lacroix G. The impact of government-sponsored training programs on labour market transition. In: Document de travail, CYRANO, 1999RP-03. 1999
- [12] Diamond P. Consumer differences and prices in a search model. *The Quarterly Journal of Economics*. 1987; **102**(2):429-436
- [13] Lancaster T. Econometric methods for the duration of unemployment. *Econometrica: Journal of the Econometric Society*. 1979;**47**(4): 939-956
- [14] Heckman J, Singer B. A method for minimizing the impact of distributional assumptions in econometric models for duration data. *Econometrica: Journal of the Econometric Society*. 1984;**52**(2): 271-320. DOI: 10.2307/1911491
- [15] Kiefer NM. Economic duration data and hazard functions. *Journal of Economic Literature*. 1988;**26**(2): 646-679
- [16] Lancaster K. The economics of product variety: A survey. *Marketing Science*. 1990;**9**(3):189-206
- [17] Lancaster T. Generalised residuals and heterogeneous duration models: With applications to the Weibull model. *Journal of Econometrics*. 1985; **28**(1):155-169
- [18] Lancaster T, Nickell S. The analysis of re-employment probabilities for the unemployed. *Journal of the Royal*

- Statistical Society. Series A (General). 1980:141-165
- [19] Lancaster T, Chesher A. An econometric analysis of reservation wages. *Econometrica: Journal of the Econometric Society*. 1983;1661-1676
- [20] Van den Berg GJ. Nonstationarity in job search theory. *The Review of Economic Studies*. 1990;57(2):255-277
- [21] Fougère D. Recherche d'emploi en présence de contrats de travail de courte durée: modélisation et estimation sur données individuelles. *Annales d'Economie et de Statistique*. 1989: 225-257
- [22] Moreau A, Visser M. Durée du chômage des jeunes en France. *Annales d'Economie et de Statistique*. 1990: 257-278
- [23] Thélot C. La sortie du chômage. In: *Mélanges économiques. Essais en l'honneur de: Edmond Malinvaud*, Economica; 1988
- [24] Fougère D. La durée du chômage en France. Réduction du chômage: les réussites en Europe. 2000:239-259
- [25] Bonnal L, Fougère D. Les déterminants individuels de la durée du chômage. *Économie & Prévision*. 1990; 96(1990-5):45-82
- [26] Joutard X, Werquin P. Les déterminants individuels de la durée de chômage: de l'intérêt de distinguer les emplois stables des emplois précaires. *Économie & Prévision*. 1992;102(1): 143-156
- [27] Bourdet Y, Persson I. Chômage des jeunes et fonctionnement du marché du travail: Les cas français et suédois. *Économie et Statistique*. 1991;249(1): 39-51
- [28] Bougroum M, Ibourk A. Les effets des dispositifs d'aide à la création d'emploi dans un pays en développement: Cas du Maroc. *Revue Internationale du Travail (BIT)*. 2003;142(3)
- [29] Cases C, Lollivier S. Estimation d'un modèle de sortie du chômage à destinations multiples. *Économie et Prévision*. 1994;113-114:177-188
- [30] Lê J, Le Minez S, Rey M. Chômage de longue durée: La crise a frappé plus durement ceux qui étaient déjà les plus exposés. In: *Vue d'ensemble-Marché du travail*, Insee. 2013
- [31] Di Paola V, Moullet S. L'emploi public et les trajectoires d'insertion des jeunes. *Economie et Statistique*. 2003; 369-370:49-74
- [32] Lachaud JP. Croissance économique, pauvreté et inégalité des revenus en Afrique subsaharienne: analyse comparative. Centre d'économie du développement, Université Montesquieu-Bordeaux IV; 1996
- [33] N'Guessan CFJ. Analyse des déterminants de l'intensité de la recherche d'emploi en Côte d'Ivoire. *L'Actualité Économique*. 2015;91(3): 339-366
- [34] Chort I, De Vreyer P, Marazyan K. L'apprentissage au Sénégal, déterminants et trajectoires. *Autrepart*. 2014;3:175-193
- [35] Mériaux B. Point de vue sur les recherches françaises en économie du travail. *Revue Économique*. 1978: 120-140
- [36] Delattre E, Salognon M. Entreprises, modes de gestion de la main-d'œuvre et allongement de la durée de chômage : une analyse économétrique. *Recherches Économiques de Louvain*. 2008;74(3): 299-325
- [37] Allison PD. *Survival Analysis Using the SAS System: A Practical Guide*. USA: SAS Institute Inc.; 1995

[38] Allison PD. Survival Analysis Using sas®: A Practical Guide (First ed.). SAS Publishing; 1995

[39] Steiner P. Le marché selon la sociologie économique. *Revue européenne des sciences sociales. European Journal of Social Sciences.* 2005;**XLIII-132**:31-64

[40] McCall JJ. Economics of information and job search. *The Quarterly Journal of Economics.* 1970: 113-126

[41] Cox DR. Regression models and life-tables. *Journal of the Royal Statistical Society. Series B (Methodological).* 1972;**34**(2):187-220. Available from: <http://www.jstor.org/stable/2985181> [Accessed: 27 May 2020]

[42] Jenkins R. Social Identity. 2nd ed. Routledge; 2004

[43] Florens J-P, Fougère D, Werquin P. Durées de chômage et transitions sur le marché du travail. *Sociologie du Travail.* 1990;**4**:439-468

[44] Lautier B. Secteur informel et emploi: l'enseignement des pays sous-développés. *Revue Tiers Monde.* 2013;**2**: 151-167