

## Reconciling Studies and Experience: Penalty or Bonus for Self-Employment or Salaried Work for Young People in Cameroon?

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### Abstract

Many young graduates from developing countries, with only general knowledge, struggle to find wage employment or entrepreneurship. This period of professional transition is often prolonged. Based on data from the 2018 Cameroon Employment Policy Improvement Survey (EAPE), conducted among 3292 young people, this study analyzes whether a first work experience acquired during studies can shorten this transition period. To do this, we used a three-equation model to correct for selection and endogeneity biases, as well as a concurrent duration at risk model. The results show that a first work experience during studies does reduce the time it takes for young people to find a salaried job or start their own business. However, after their studies, young people first look for a salaried job and only turn to self-employment after several failures. Employment policies need to be reoriented or expanded to promote young people's engagement in well-designed work experiences at school.

**Keywords:** education-work experience; self-employment; salaried work; transition time

### 1. Introduction

The importance of human capital, and more specifically of the combination of education and experience, in the transition of young people to the labour market has been frequently mentioned in academic and political discourse over the past 50 years. However, very few studies mention in their results what happens after schooling. Indeed, while graduation marks the end of the school process, it also heralds the beginning of another lifelong process, that of having a job in the job market (Bjørn et Røpke, 2018a). According to the survey Afrobaromètre (2015), young people are three times more likely to be unemployed than adults, and the academic profile, when not accompanied by a first work experience before graduation, tends to increase the transition time of young people. Recent empirical evidence shows that a significant proportion of young people experience relatively long transition periods between leaving education and the transition time to the world's first job (Dedehouanou et al, 2022; Garcia and Fares 2008; Oumba, 2016). And Cameroon, like most other countries in the world, is not on the sidelines of this situation.

As in most developing countries, the transition time to the labour market varies from less than a year to 40.3 months in Cameroon (Boutin 2010; Scott, 2019) and more than half of the young people leaving the education system have spent more than a year unemployed. In addition, young people with a primary level of education experience a longer period of unemployment (47 months) than those with a secondary level (37 months) or higher (31 months) (BIT, 2015a). Faced with this observation, more and more young people are choosing to combine study and work to gain experience and improve their job prospects. This phenomenon, which aims to compensate for the lack of immediate experience after training, has increased from 5.25% in 2003 to 13.14% in 2014 (INS, 2014). Nevertheless, the lack of specific experience, in particular of immediate productivity at the end of initial training, is often put forward to explain the difficulties encountered by young people in their transition to the labour market (Björn et al. 2016; Garcia and Fares 2008; Manacorda et al, 2017).

Recent studies suggest that successful employment is based on a combination of a university degree and work experience (Béduwé et Espinasse, 1996). Indeed, the lack of experience penalizes some graduates on the job market (Béduwé et Cahuzac, 1997), pushing them to obtain additional diplomas or to combine studies and internships (Björn et al, 2016; Manacorda et al, 2017). As a result, the transition process is not uniform, and the length of transition appears to be inversely related to the level of education (Matsumoto and Elder, 2010). For example, obtaining a four-year degree rather than a three-year degree can accelerate this transition Caves et al (2021). However, research from Assaad et Krafft (2014) do not find a meaningful link, while Boutin (2010) shows an inverse correlation, where high school graduates find a job faster than elementary school graduates.

Although the theory of human capital work (Becker 1964; Mincer 1974; Akono and Nanfosso 2013), has largely associated education and experience with salary, few studies have empirically examined the impact of a first work experience acquired before graduation on the length of young people's transition to wage employment or self-employment (Manacorda et al, 2017). The existing works provide various insights. In France, Béduwé et Cahuzac (1997) have shown that reconciling studies and experience increases the probability of getting a job quickly, so fixed-term contracts during studies lead to fixed-term contracts and odd jobs to odd jobs. For Spain, Sanchez-Gelabert et al (2017) found that, despite a risk of repeating a year, this practice helps students develop skills and professional contacts, thus improving their transition time. However Nilsson (2015), finds, on the basis of descriptive statistics, that the effect of reconciling education and experience in 20 countries on the transition varies greatly from one country to another. One of the criticisms of this work is that it most often uses the direct measure (which consists of asking the individual directly if he or she has worked or done internships during studies) of the school-experience balance, yet the School to Work transition (SWTS) surveys recommend the use of the indirect measure (which consists of constructing the education-experience balance variable from the section on the activities that young people carried out before leaving the education system) Nilsson (2016).

To our knowledge, the only study on developing countries (DCs) is that of Dedehouanou et al (2022) in Benin. Although they used a competing at-risk duration model, their analysis, based on direct measurement, did not distinguish between salaried jobs and self-employment. For his part, Nilsson (2016) used both direct and indirect measures, but limited itself to linear probability models, which do not study transition duration. To overcome these methodological shortcomings, this article aims to verify whether acquiring work experience during studies shortens the transition period of young people to the labour market in Cameroon. More specifically, the study hypothesizes that this experience, measured indirectly, significantly reduces the duration of access to both salaried employment and self-employment. Section 2 provides a review of the theoretical and empirical literature on the relationship between first work experience during studies and the length of time young people transition to each of the outcomes. Section 3 presents the methodology used to assess the effect of the experience gained during the studies on the duration of transition to either paid employment or self-employment. The results are presented in section 4, while section 5 concludes the paper.

## **2. Reconciling Education and Experience and Transition: Literature Review**

### **2.1 Theoretical underpinning**

The literature on professional transition can be synthesized around three major theoretical currents: the theory of human capital, the theory of signals and the theory of competition for employment. Each of these approaches, although distinct, contributes to the understanding of the process of young people's transition from school to the labour market. According to the theory of human capital, illustrated by the work of Becker (1964) and Mincer (1974), education is an investment that increases workers' productivity, resulting in higher wages. Becker (1964) affirms this view by distinguishing between general training and specific training (through employment), stressing that the latter, despite a higher initial cost, is associated with better results in terms of wages. Mincer (1974) Quant focuses its analyses on the number of years of study, post-study work experience and salary. The main limitation of these early studies is that they only consider the experience gained only after the end of studies. Moreover, they measure the success of the transition solely by salary, ignoring other forms of employment such as self-employment (Dedehouanou et al, 2022; Sanchez-Gelabert et al, 2017).

Complementary to this work, signal theory suggests that employers use diplomas not as proof of acquired productivity, but as signals to identify candidates' innate aptitudes. Arrow (1973) postulates that education serves to reveal innate skills, which the employer cannot directly observe. The diploma thus becomes a signal that guarantees the company a minimum level of skills. Spence (1974) develops this idea by showing how individual characteristics and associated signals can influence the recruitment decision. The employer may require higher signals to reduce uncertainty, which can disadvantage candidates from less advantaged backgrounds. Pigliaru and Vannini (1995) add that signal quality is paramount. They point out that the multiplication of diplomas can complicate the interpretation of signals, but that the training curriculum remains a relevant filter. While these models recognize the importance of signals, they do not fully explain the impact of vocational pathways. In addition, they can be distorted by imperfect information or poor quality signals, leading to long and difficult competing professional transitions.

Thurow (1974, 1975) offers an alternative vision. In his theory of competition for employment, candidates do not compete with each other by their salaries, but by seeking to minimize the costs of their training in a company. The employer ranks candidates in a *labor queue* based on the estimated training cost. Candidates with the lowest costs are given priority. However, in this context, higher degrees are not always an advantage, unless they reduce training costs. Candidates with work experience are often at an advantage, as their curriculum sends a clearer signal about their future skills and training costs, reducing uncertainty for the employer. While theories of human capital, signal, and job competition shed important light on the transition of young people to the labour market, they have common limitations. The main one is the omission of work experience acquired during studies (internships, student jobs). However, this experience, as well as the individual characteristics of candidates, plays a crucial role in the recruitment process and influences the duration and quality of the transition of young people (Dedehouanou et al. 2022). It is therefore essential to integrate these dimensions for a more complete analysis.

### **2.2 Empirical Evidence**

Initial checks of this relationship revealed several discontinuities in the performance of reconciling education and work experience during studies in developing countries than in those developed. Although the literature on this relationship is very mixed, it has remained focused on PD (Béduwé & Espinasse, 1996; Manacorda et al. 2017; Nilsson, 2016), most studies use the direct measurement of the accumulation of education and experience. To our knowledge, the only study that has addressed this relationship in developing countries is that of Dedehouanou et al (2022). Based on the data from the Survey *School-to-Work Transition Survey* (SWTS) of 2014, they estimated a three-equation model and a duration model to account for endogenous allocation and sample selection. They have thus shown that a first professional experience reduces the transition from school to the first job in Benin. However, their results were significant only for male youth and youth who left school with at least a high school diploma. In addition, the authors capture integration in

a global way without providing details on salaried and non-salaried jobs. If Nilsson (2016) provides results for several countries, including those in sub-Saharan Africa, its results are obtained solely on the basis of descriptive statics and a linear probability model (which consists of estimating a dichotomous variable from ordinary least squares Nilsson (2015)). As for Cameroon, there is almost no work on this relationship. The few existing studies focus on the effect of student work on university repetition in Cameroon (Ngoko et al, 2022) and on the effect of child labour on their school attendance in Cameroon (Kamga, 2011).

With regard to child labour, Kamga (2011) assesses the occupational value of child labour during studies on their school attendance using Cameroon's third household survey and finds that child labour has adverse effects on school attendance. Ngoko et al (2022) have instead analyzed the effect of students' work on university repetition in Cameroon. Their results will reveal that beyond 30 hours of work per week, working increases the likelihood of repeating the academic year.

In the PDs, the literature is abundant (Béduwé and Cahuzac, 1997; Geel and Backes-Gellner, 2012; Hotz et al, 2002; Light, 1998). Using data from the 1998 Céreq survey to test the effect of work experience during studies with a multinomial logit model in France, the results of the analyses of Béduwé et Cahuzac (1997) will show that reconciling studies and experience increases the probability of quickly integrating at the end of studies. In this context, they argue that reconciling education and experience provides skills that send signals to the employer. The explanation for this is that the work carried out during studies can be extended for some time after leaving the education system. By distinguishing between traditional students and employed students, they will find that having obtained a first work experience before leaving school increases the chances of quickly finding a job, but under equivalent conditions. As a result, subsidised contracts during studies lead to subsidised contracts, permanent contracts to permanent contracts. It also establishes that even if career paths differ, having reconciled education and experience spares young people from long periods of transition. Among the activities carried out during studies, he mentions that low-paid internships in companies are advantageous in terms of reducing the transition time of young people.

Using unique Belgian longitudinal data, (Baert et al., 2022) find that students who work during the summer holidays are more likely to be employed three months after graduation. This work bonus for pupils in secondary education is higher when pupils also work during the school year. The decomposition of this total effect shows that the direct return on students' work during secondary education overcompensates for its indirect non-positive effect via academic success. This effect also decreases over time, with the bonus for a combination of work during the summer and the school year becoming statistically insignificant five years after graduation. In the United States, the work of Hotz et al (2002) find that the estimated returns to labour during secondary or university education are significantly reduced in magnitude and are not statistically significant when dynamic selection methods are applied. However, the existence of heterogeneous returns according to the intensity of the balance between education and experience has been generally neglected in the literature.

The work of Light (2001) shows that there is a positive return to student work only when work-study balance exceeds 21 hours per week. Focusing on the link between student work and field of study, several authors emphasize the importance of consistency. Indeed Geel et Backes-Gellner (2012) find that students with a job related to their degree have higher earnings after graduation. Likewise Weiss et al (2014) as well as Robert et Saar (2012) confirm that a strong correlation between employment during higher education and field of study improves subsequent employment opportunities. These findings highlight the heterogeneous impact of student work on employment outcomes. The beneficial effect depends not only on the fact of working during one's studies, but above all on the nature of the job and its suitability for the university course. Passaretta et Triventi (2015) also examined this relationship in four European countries. However, since they cannot control for the unobserved factors that influence both student employment and labour market success, they interpret their results in a purely descriptive way, without attributing a causal link to them.

Another debate concerns the measurement of the balance between studies and experience, with the exception of the surveys carried out in Brazil and Colombia where the design had been adapted. Nilsson (2015) uses direct or subjective measurement. Indeed, between 2014 and 2016, the ILO implemented additional surveys in 25 countries, this time using a revised questionnaire to allow the identification of all economic activities, regardless of the date of completion of schooling. In this dynamic, it is now possible to identify the acquisition of a first work experience during studies from the historical grid of economic activity young people. Using this measure, Nilsson (2016) The ILO's School to Work Transition (SWTS) data from 20 countries found that young people who have reconciled work with study experience faster transitions to stable and satisfying jobs, and lower unemployment rates. He also finds that young people from developing countries who combine studies and experience have for the most part transitioned to self-employment at the end of their studies.

Balancing education and experience can facilitate the career transition of young people in several ways, including by expanding their social network. As demonstrated by Calvo-Armengol et Jackson (2004), an extensive social network significantly increases the chances of finding a job. By working during their studies, young people come into contact with professionals in the labour market, which can open doors for them for the future. These relationships can provide recommendations or information about job opportunities, helping to reduce the risk of unemployment. The absence of these connections can limit access to information on available jobs, thus prolonging the search period. In addition to expanding the network, student work offers direct contact with employers. If the job is related to the student's field of study, this part-time experience can serve as a stepping stone to a full-time position with the same company after graduation. Engagement with employers during studies thus acts as a filter, increasing the chances of a successful transition and reducing the transition time to the labour market.

In developing countries, a specific context is emerging, characterised by a limited capacity of public universities in the face of very high student demand. This situation is particularly interesting for studying the balance of studies and experience, particularly for students at state universities, whose training programs do not systematically include internships. The question of the impact of student work on the duration of transition remains largely unexplored in these contexts. It is therefore crucial to provide empirical evidence of the relationship between the accumulation of education and work experience over the transition period, taking the example of Cameroon. An analysis of the influence of this dual characteristic (academic training and professional activity) on salaried work and self-employment must take into account the endogeneity bias that could distort the results. To obtain reliable conclusions, the application of an econometric analysis method capable of correcting these biases is essential.

### **3. Methodology**

#### **3.1 The Conceptual Framework**

To analyze the economic consequences of work experience during studies on the transition time of young people to the first job, we rely on rational choice theories and the random-utility model initiated by McFadden (1981) and taken up by Lankford et Wyckoff (1992). Indeed, young people faced with lack of experience are assumed to be heterogeneous agents and their decision to reconcile studies and experience is conditioned by the success of their future transition (Epple and Romano, 1998). The search for a first experience will only be possible if young people anticipate that it will send better signals of productivity to employers. Therefore, the young person's decision to work as a student and as an internship, rather than just attend, could be seen through the lens of optimization under constraint where the experience will be beneficial for a rapid transition into the job market (Epple & Romano, 1998; Totouom et al, 2018).

Let us consider a young person still in the education system who has a utility function of the form:

$$U = (U_1, U_0).$$

Let's refer to the gains associated with experience during studies and the gains associated with attending only. Based on the framework of random utility, a student seeks to acquire a first professional experience before

the end of his studies if the benefit resulting from this choice is positive. This translates into the condition:  $U_1 > U_0$ . The net benefit  $U^* = U_1 - U_0$  is represented by a latent variable ( $d_i$ ) taking the value 1 for young people who have reconciled education and experience and 0 otherwise.

In this context, the transition to one of the outcomes of the labour market is linked to a set of arguments such as education, experience, family characteristics and the unemployment rate. It is therefore this function of transition duration that will be estimated in the context of this work. The analysis of this process is a multidimensional concept, and the way to approach it is not unanimous. The following section reviews the empirical specification of the econometric model.

### 3.2. Empirical Specification of the Econometric Model

The first relates to the variable of interest (education-experience). In fact, the evaluation of the effect of work during studies on the length of transition of young people to each exit from the labour market assumes that we are interested only in young people who have reconciled education and experience, whereas there are simultaneously four groups of young people, namely:

(i) those who have completed their transition (ii) those who attend only (iii) those who attend by seeking a first work experience through internships (iv) and young people who are neither in the education system nor in the labour market.

Thus, taking an interest in those who reconcile studies and experience and who are in salaried or self-employed employment poses a selection problem. If Roy (1951) lays the theoretical foundations of this problem, Lee (1983) illustrates the correction technique. However, this is only valid in the presence of two choices. In our case, its correction will be made by the method of Heckman (1979), which is more suitable when the number of alternatives is greater than two.

Second, to correct for endogeneity bias related to unobserved factors that influence the decision to work during studies, we use a methodology inspired by Heckman et Robb Jr (1985). Instead of directly assessing the effect of the school-experience balance, we replace it with the predicted probabilities of having worked while in school. This approach ensures that the variable of interest is independent of unobserved characteristics. As a result, we have adopted a two-step methodology, inspired by the method of instrumental variables of Heckman et Robb Jr (1985). The first is to correct the selection bias according to the Heckman (1979). To do this, we calculate the predicted value of work experience from the predictors of the simple probit model. This predicted variable will then be integrated into the concurrent duration at risk model for salaried employment and self-employment, in order to account for endogeneity bias (Dedehouanou et al, 2022; and Sabatier, 2003). In the second step, we use a concurrent duration of risk model to assess the effect of cumulative education-experience on the length of transition to each outcome.

#### 1.3 Step One: Modelling the Balance of Education and Experience

In the first step, the reconciliation of studies and experience is estimated by the simple probit model, which is more suitable in the case of binary variables. The school-experience balance is represented by a binary variable equal to  $Y_{1i}$  if the young person has reconciled education and experience and 0 otherwise. If the balance between studies and graded experience is positive, we have the equation below:  $Y_{1i}^*$

$$Y_{1i}^* = X_i\beta_i + \varepsilon_i \quad (1)$$

With  $X_i$  the vector of individual exogenous characteristics associated with the coefficients  $\beta_i$  at the error term that follows a normal distribution of parameter  $\varepsilon_i|0$  and 1.

Let be an observed main variable corresponding to the accumulation of studies and experience. is the vector of explanatory variables that groups two categories of variables. The first refers to the exclusion variables that exclusively explain the accumulation of studies and experience, without having an influence on the duration of the transition. To this end, to identify the selection and outcome equations, this research uses the parents' education level as instruments in the selection equation. is given by:  $Z_{1i}Y_{1i}Z_{1i}$

$$\begin{cases} 1siX_i\beta + \varepsilon_i > 0 \\ 0siX_i\beta + \varepsilon_i \leq 0 \end{cases} \quad \text{with} \quad Z_{1i} = X_i\beta + \varepsilon_i \quad (2)$$

The eligibility of this instrument is established by performing a simple falsification test following Mincer et Polachek (1974) ; Di Falco, Veronesi, et Yesuf (2011) ; Dedehouanou et al (2022). If this variable is a valid selection instrument, it will affect the decision to balance education and experience, but not labour market outcomes. Indeed, the level of education of the parents, which is an indicator of the family environment, can be used as an instrument since the economic literature predicts that the lower the level of education of the parent, the greater the family needs, which may, to a certain extent, force the young person to reconcile studies and experience. In addition, this variable is expected to reflect parents' preferences for their children's educational profiles, which may to some extent explain their labour market outcomes. The second group of variables relates to the set of control variables that determine the transition time.

#### **1.4 Step Two: Modelling the Balance of Education and Experience and the Length of Transition to First Job**

The analysis of transition times is generally dealt with using survival functions. In this regard, to evaluate the efficiency of the balance of education and experience considered endogenous over the transition time of young people, we use a concurrent risk duration model. This method takes into account the heterogeneity of labour market outcomes. In fact, two employment outcomes are considered: young people can access salaried work or self-employment. Considering the simplest case where employment is the only option for a successful transition, the instantaneous probability of exiting the transition period at time  $d$ , conditional on the fact that this exit has not yet occurred, is defined as the risk function below:

$$h(d, \phi) = \lim_{\Delta \rightarrow \infty} \frac{P(d \leq D + \Delta | D \geq d)}{\Delta} = \frac{F(d, \phi)}{S(d, \phi)} \quad (3)$$

With  $F(d, \phi)$  the density function. In this specification is the number of months of transition from the exit of the education system to each exit. And  $\phi$  the vector of the parameters to be estimated.

Subsequently, we estimate the discrete-term proportional risk or chance function given by:

$$h(d, \phi) = \vartheta_i \lambda_0(d) \text{Exp}(\alpha ET_i + \beta X_{id} + \delta X_{2id}) \quad (4)$$

In the specification of the cumulative education-experience model and the transition time to each labour market outcome,  $D$  is the transition time from school to the labour market, assumed to be a random variable whose cumulative function represents the probability of access to each outcome at time  $d$  given by the relation below:

$$F(d, \phi) = P(D \leq d), \forall d \geq 0 \quad (5)$$

With the random effect specific to each individual that takes into account unobserved sources of heterogeneity that are supposed to take a multiplicative form. is the baseline risk that explains the dependence of the risk on each risk  $\vartheta_i \lambda_0(d)$ . This is the risk Snapshot to exit the transition when all covariances are zero. This risk can be expressed as a logarithmic or polynomial function of each month's survival time.  $Y_{1i}$  (study-experiment) is the variable of interest, and  $X_{id}$  and  $X_{2id}$  the vectors of the explanatory variables fixed in time;  $\alpha$ ,  $\beta$  and  $\delta$  their parameters to be estimated. Equation (3) is estimated by the maximum probability distribution using a weibull distribution for unobserved individual heterogeneity (Jenkins, 1997; Meyer-Adams et Conner, 2008).

By estimating the transition time (D) given by the equation of results or exit from unemployment (6), incorporates the predicted value of the combination of education and experience ( $Y_{1i}$ ) (8) to account for endogeneity bias. From this prediction, it is possible to calculate the inverse of the ratio of millets that we call *Lamdai* given below:

$$T_i = \alpha_{1i} ET + Lamda_i + \beta X_i + u_{1i} > 0 \quad (6)$$

$$Y_{2i} = \begin{cases} 1 & \text{if } \gamma Z_{2i} + u_{1i} > 0 \\ 0 & \text{if } \text{sinon} \end{cases}, \text{ with } \text{Lamda}_i = v[w^{-1}(P_i)]/P_i \quad (7)$$

Where education-experience is the endogenous treatment variable constructed from the activities performed by young people when they were still in school, the vector of control variables, and an indirect measure of work-study balance. These activities include internships and student work.  $Z_{2i}$  is the instrument or predicted value of the work-study balance, which is needed to calculate the inverse of the ratio of millets ( $\text{Lamda}_i$ ) and  $\alpha_{1i}$ ,  $\beta$  and  $\phi$  are the parameters to be estimated. The error term follows a normal distribution with a zero mean. The correlation between the error terms is given by:

$$\text{corr}(u_1, u_2) = \rho$$

Equations (6) and (7) are the main part of the multi-equation model, they make it possible to establish the correlation between the unobserved factors, which have an effect on the processing of the main results, particularly on the duration of access to employment. The treatment variable reconciling studies-experience is endogenous with a correlation  $\rho \neq 0$ .

Given that the transition time to each market exit is only unobserved for young people who are no longer in the education system at the time of the survey. Average duration  $D$  is observed if the selection variable is equal to 1. The equation (7) thus forms a block of the Heckman model (Heckman, 1976; Lewis 1974).

Finally, all young people manage to integrate so well that the transition period is not censored. Knowing that about 80% of them have access to self-employed jobs (employer, self-employed worker, family helper, apprentices), this work takes into account the heterogeneity of the outcomes on the labour market by distinguishing between *salaried* jobs (in particular, managers/engineers; middle managers/supervisors; employer/workers and labourers) and *self-employment* (made up of employers, self-employed workers, family workers, and apprentices). At this level, the duality of the outcomes of access to employment and the existence of a segmentation of the Cameroonian labour market lead to taking into account in the regression of the duration model, the duality of outcomes on the labour market. In other words, the prospector can transition to a salaried job, or to self-employment. The lakh probability function of a two-issue duration model is written as follows:

$$\ln L = \sum_{i=1}^n \text{Salari}_i \ln \theta_{1i} + \text{NonSalari}_i \ln(\theta_{2i}) + \kappa \text{Lamda}_i + \ln S(d_i) \quad (8)$$

With a binary variable equal to  $\text{Salari}_i$  if the young person has obtained a salaried job assumed to be from 1; another dichotomous variable equal to  $\text{NonSalari}_i$  if the young person has transitioned to self-employment considered as outcome two. The and are the chance rates associated with each outcome. The tracking function is given by the relationship below:  $\theta_{1i}\theta_{2i}$

$$S(d_i) = [1 + \sigma^2(\varphi_i d_i)]^{-\frac{1}{\sigma^2}} \text{ in this case chance becomes: } \theta_i(d_i) = [S(d_i)]^{-\sigma^2}$$

Given that an estimate by the model of duration with dependent competing risks poses several problems of identification and knowing that durations have proportional intensities of access to employment, Lancaster (1990) assumes that the duration model can be estimated as a single-outcome model considering the other censored observations against that outcome. We therefore estimate the following likelihood functions:

$$\ln L_{\text{Salari}} = \sum_{i=1}^n \text{Salari}_i \ln(\theta) - \ln(1 + \sigma^2 \theta_i d_i) \left( \text{Salari}_i + \frac{1}{\sigma^2} \right) \quad (9)$$

$$\ln L_{\text{NonSalari}} = \sum_{i=1}^n \text{NonSalari}_i \ln(\theta) - \ln(1 + \sigma^2 \theta_i d_i) \left( \text{NonSalari}_i + \frac{1}{\sigma^2} \right) \quad (10)$$

The chance rate is written:  $\theta_i = [ET]^{1+\alpha} \exp\{\zeta Dure_i\}$

With  $ET$  the predicted value of the education-experience variable which represents the anticipation of the improvement of one's future integration. And  $\zeta$  a parameter of the transition duration distribution function.

In addition to the predicted value of the school-experience balance that we use as an instrument, we also use the parents' level of education. Table 1 below describes the variables used:

**Table 1:** Definition of the variables used in the regression

Variables	Defining Variables
Duration	Continuous variable variable. It is not censored
Employment	Variable dummy equal to 1 if the young person is in a salaried job and 0 if not
Employment	Dummy variable equal to 1 if the young person is self-employed and 0 if not
Work-Study Balance	Dummy variable of interest equal to 1 if the young person had reconciled studies and experience and 0 if not
Age	Continuous variable between 15 and 35 years
Age (in years)	Continuous variable and is between 15 and 35 years old
Sex	Dummy variable equal to 1 if boys and 0 if girl
Has a child	Dummy variable equals 1 if the young person has a child and 0 if not
Marital status	Multinomial variable with 0 modalities. It is equal to 0 if the young person is divorced, 1 if he is single, 2 if he is in a common-law union and 4 if he is cohabiting
Domain from formation	Multinomial variable with 7 modality and equal to 0 if other, if general programs, 2 if education, literature and arts; 3 if social sciences; 4 if science, mathematics and computer science; 5 SI engineering and processing industry and 6 SI agriculture, veterinary sciences and health.
Adequacy of training and employment	Variable with three modalities and equal to 0 if overqualified; 1 if over-qualified and 2 if under-qualified
Level of education	Multinational variable equal to 0 if primary; 1 if general secondary cycle one; 2 if general secondary cycle two; 3 if secondary technical first cycle; 4 if technical secondary second cycle and 5 if higher level
Company-funded training	Variable dummy equals 1 if yes and 0 if no
Unemployment rate	Continuous qualitative variable
Level of the mother's education	Multinomial variable equal to 0 if without level; 1 if primary; 2 if secondary, first cycle; 3 if secondary, upper and 4 if higher
Socio-professional category of the CM	Multinomial variable equal to 0 apprentices; 1 if senior manager; 2 if middle manager; 3 if worker; and 4 if self-employed

Source: Author, based on Cameroon's EEPA 2018 database.

## 1.5 Data and some Descriptive Statistics of the Study

We use data from the Survey on the Improvement of Employment Policies in Cameroon (EAPE) conducted in 2018 by the International Development Research Center (IDRC) and the Center for Research in Economics and Management (CEREG). The survey used a 6-section questionnaire to collect information on the situation of young people. These relate to the socio-demographic characteristics of young people and households, education and training profiles or pathways, formal training, unemployment situations, their aspiration in terms of activities, young people not in the labour force and include a retrospective question on the activities carried out by young people between the period 2011 and 2017. These activities include student internships, student work and professional activities carried out during studies.

At the end of the survey, 3292 individuals were questioned, most of them, about 93.98%, are in the 15-35 age group. Our sample is based on 2569 young people, i.e. 78.09% of young people who, at the time of the survey,

were no longer in the education system. Of these young people, 317 have completed their transition to salaried employment, compared to 368 who have transitioned to self-employment. Finally, our sample is made up of 685 young people who have transitioned to self-employment or self-employment, because it is only for these young people that the transition period can be observed. We deal with the selection problem by taking into account the 721 young people, i.e. 21.91% of them, who were still in the education system at the time of the survey. The dependent variable is the transition time between school and paid or self-employed work and does not include domestic work that is unpaid. Each individual is observed over a period  $T$  corresponding to the interval for which he or she leaves the education system and obtains a first job.

Table 2 presents descriptive statistics for some of the variables used. It shows that a little more than half of the young people, i.e. 56.42%, had reconciled studies and experience during their studies, compared to a little less than half, i.e. 43.58%, who were only attending school. Overall, among the young people who had found a salaried job, 60.72% had worked during their studies compared to 39.28% who had only attended school. Of those who completed their transition to self-employment, 72.58% had reconciled education and experience compared to 27.42% who had not worked while studying. In terms of the length of transition to each exit from the labour market, it can be read in general that young people who focus solely on education have a longer average transition time (10.86 months) than young people who have reconciled education and experience (8.81 months). In terms of labour market outcomes, young people who worked during their studies spent an average of 8.62 months unemployed before setting up their own business, while those who found paid employment lasted 10.93 months. When we look at young people who attend only school, it appears that those who have found a salaried job have a longer average transition time than young people who have set up their own or are self-employed, i.e. on average 11.09 months compared to 8.88 months respectively.

A disaggregation by field or training course reveals that among the young people who have obtained a salaried job, a little more than half (i.e. 55.63%) have a training course in social sciences, business and law, followed by those in engineering and production industry (18.34%), those in the Educational Sciences, Literature and Arts courses (8.72%) and those in agriculture. Health and veterinary sciences have the lowest proportion (3.39%). Also, those who are self-employed are mostly represented by young people in the fields of social sciences, business and law (42.49%) followed by young people in the fields of engineering, business and law and those in the fields of agriculture, health and veterinary sciences come at the bottom of the scale with a lower proportion (i.e. 3.43%). In terms of transition duration, among young people who have gained access to paid employment, those in mathematical and computer sciences, general programmes, engineering and production industry have a longer transition period (11 months), while those in agriculture, health and veterinary sciences have a longer transition duration (i.e. 7.93 months). In addition, among young people who are self-employed, those in the social sciences business and law fields have a longer transition period (13.48 months) and those in agriculture, health and veterinary sciences have a shorter transition period (5.5 months).

An analysis by level of education reveals that, among young people who have transitioned to wage employment, those with primary education have on average a longer transition time (i.e. 27.50 months), followed by those with upper secondary technical level (10.34 months) and those with upper secondary general education have a shorter transition time (i.e. 3.43 months). Among those who have set up their own or are self-employed, it can be read that the longest transition periods are that of young people at the primary and general secondary levels of lower secondary education, with an average transition period of 13.75 months and 13.90 months respectively, followed by young people with upper secondary technical education (10.30 months). young people with higher levels of education (10.07 months). Young people with general secondary level, first and upper secondary level, come at the bottom of the scale with the shortest transition times (i.e. on average 5.41 months and 5.50 months respectively).

**Table 2:** Descriptive statistics for selected variables used

Explanatory variables	Paid work	Duration	Employment	Duration	Together	Duration
<b>Frequent and work</b>						
Frequent only	39.28 (0.48)	11.09	27.42 (0.49)	8.88	43.58	10.86
Studies-experience	60.72 (0.48)	10.93	72.58 (0.49)	8.62	56.42	8.81
<b>Field of training</b>						
Other	2.60 (1.23)	8.68	2.15 (1.24)	13.55	2.50(1.242)	9.75
General Programs	4.12 (1.23)	11.14	8.80 (1.24)	11.78	5.15(1.242)	11.42
Eduaction Literature and Arts	8.72 (1.23)	9.87	7.30 (1.24)	13.48	8.40 (1.242)	10.36
Science/Business/Law	55.63 (1.23)	9.33	42.49 (1.24)	9.62	52.74(1.242)	9.27
Science/Math/Info	7.20 (1.23)	11.94	13.09 (1.24)	10.76	8.50 (1.242)	9.11
Engineering/Industry Production	18.34 (1.23)	11.24	22.75 (1.24)	8.98	19.31 (1.242)	11.74
Argarianism/Health/Veterinary	3.39 (1.23)	7.93	3.43 (1.24)	5.5	3.40 (1.242)	10.47
<b>Level of education</b>						
Primary	0.06 (0.44)	27.5	0.43 (0.66)	13.75	0.140 (0.462)	18.33
General Secondary Cycle 1	0.73 (0.44)	8.04	1.07 (0.66)	13.9	0.80 (0.462)	9.76
General secondary 2nd cycle	0.48 (0.44)	3.43	1.28 (0.66)	5.41	0.66 (0.462)	4.28
Technical Secondary Cycle 1	0.30 (0.44)	5.7	1.07 (0.66)	5.5	0.47 (0.462)	5.6
Secondaire technique 2nd cycle	1.39 (0.44)	10.34	2.78 (0.66)	10.3	1.70 (0.462)	10.33
Upper	97.03 (0.44)	9.97	93.36 (0.66)	10.07	96.22 (0.462)	9.89
<b>Highest degree</b>						
CEP/FSLC	0.30 (1.42)	9.97	1.29 (1.71)	9.16	0.52 (1.479)	10.72
BEPC/CAP/GCEOL	1.76 (1.42)	7.43	3.65 (1.71)	11.14	2.17 (1.479)	8.8
General/technical probationary	0.91 (1.42)	9.3	1.72 (1.71)	5.81	1.09 (1.479)	8.08
BLOCKED/CANCELLED	11.56 (1.42)	12.32	19.96 (1.71)	11.52	13.41 (1.479)	11.57
BEP	1.94 (1.42)	10.79	1.93 (1.71)	10.72	1.94 (1.479)	10.52
BTS/DUT/HND/DEUG	14.23 (1.42)	11.21	19.31 (1.71)	10.5	15.34 (1.479)	11.06
Bachelor's degree	44.55(1.42)	9.78	34.55 (1.71)	8.16	42.35 (1.479)	9.45
Mastery and more	24.76 (1.42)	8.42	17.60 (1.71)	11.71	23.18 (1.470)	8.84
<b>Adequacy of training and employment</b>						
Adapted studies	4.69 (0.56)	11.28	6.46 (0.58)	10	65.50 (0.587)	11.08
Over Qualified	70.44 (0.56)	9.62	47.88 (0.58)	10.61	29.43 (0.587)	9.72
Under-qualified	24.88 (0.56)	10.4	45.66 (0.58)	9.57	5.08 (0.587)	10.01
<b>Has completed vocational training</b>						
To be followed	27.85 (0.27)	10.37	32.55 (0.32)	8.2	28.88 (0.31)	9.87
Didn't follow	72.15 (0.27)	9.76	67.45 (0.32)	10.9	71.12 (0.31)	9.8
<b>Socio-demographic characteristics</b>						
Age	30.33 (30.33)	/	31.32 (6.96)	/	29.893(5.246)	/
<b>Sex</b>						
Feminine	42.43 (0.49)	9.51	36.62 (0.48)	11.43	41.15 (0.498)	9.83
Masculine	57.57 (0.49)	10.23	63.38 (0.48)	9.21	58.85 (0.498)	9.86
<b>Marital status</b>						
Bachelor	67.86 (0.78)	9.77	61.46 (0.79)	9.34	66.45 (0.749)	9.54
Common-law union or cohabitation	14.23 (0.78)	11.92	19.91 (0.79)	10.81	15.48 (0.749)	11.64
Married	17.92 (0.78)	8.91	18.63 (0.79)	11.4	18.07(0.749)	9.48
<b>Socio-professional category</b>						
<b>CM</b>						
Apprentice and other	4.74 (1.91)	15.2	5.03 (1.24)	14.03	4.80 (1.195)	14.74
Senior Executive	22.67 (1.91)	8.76	21.23 (1.24)	9.81	22.35 (1.195)	8.96
Middle management	18.72 (1.91)	7.9	13.97 (1.24)	6.05	17.67 (1.195)	7.3
Worker	32.07 (1.91)	10.22	31.28 (1.24)	11.13	31.90 (1.195)	10.32
Own account	21.80 (1.91)	8.75	28.49 (1.24)	10.8	23.28 (1.195)	9.51
Number of observations		317		368		685

**Source:** Author, based on EAPE database carried out in 2018. The values in parentheses are the standard deviations.

As regards the adequacy of training and employment, it is clear from Table 2 that among the young people who have obtained a salaried job, 70.44% are overqualified in their job; 24.88% are under-qualified and only 4.69% say they have training adapted to their job. Those with the education appropriate to their job have a longer transition period (i.e. an average of 11.28 months), followed by those who are under-qualified (10.40 months on average) and those who report being over-qualified in relation to their job (11.28 months on

average). Among young people who have set up their own business, 47.88% are overqualified in relation to their job and have spent an average of 10.61 months unemployed before finding a job, while only 6.46% who have studies adapted to their job have an average of 10.00 months of unemployment before entering the job. In terms of gender, it appears that more than half, or 57.57%, of boys are in salaried employment compared to 42.43% of girls. However, the transition time is longer for girls than for boys, at 10.23 months compared to 9.51 months respectively. While 63.38% of boys compared to 36.62% of girls complete their transition in self-employment and the transition period is longer for girls than for boys, i.e. on average 11.43 months compared to 9.21 months respectively.

Table 3 below shows the average length of transition according to whether the young person has reconciled studies and professional activities, according to his or her academic profile, gender and whether or not he or she is the victim of a disability. Thus, young people who have balanced work and education seem to have a shorter average transition time than young people who attend only school. Those who have a salaried job and who worked during their studies have been unemployed for an average of 8.88 months, while those who have only attended school have an average of 11.09 months. Similarly, those who were self-employed or self-employed and worked during their studies lasted an average of 8.62 months compared to 10.93 months for those who attended only.

**Table 3: Distribution of young people balancing work and work**

Sectors of activity	Proportion	Average	Standard deviation
Public administration	4.70	0.791	0.414
Public or parapublic company	7.21	0.708	0.464
Private non-farm business	88.86	0.884	0.320
Farming (plantation. fields)	0.74	1.000	/
International Organization	0.25	1.000	/
Associative company	0.74	1.000	/
Cleaning person	0.50	1.000	/

Source: author, based on EAPE database carried out in 2018

Table 4 shows that the end of transition is also sensitive to the academic stream or pathway, young people in the education, literature and arts streams take on average a little longer, i.e. 13.48 months, to set up their own business, while young people in the agriculture, health and veterinary sciences streams take on average less time, i.e. 5.50 months, to transition to self-employment or self-employment. As for young people entering wage employment, young people in science, mathematics and computer science, engineering and production industry and general programmes spent on average longer in unemployment, i.e. 11.94 months, 11.24 months and 11.14 months respectively to exit the transition to wage employment. However, the shortest transition period is observed among young people in agriculture, health and veterinary sciences training courses, i.e. 7.93 months on average.

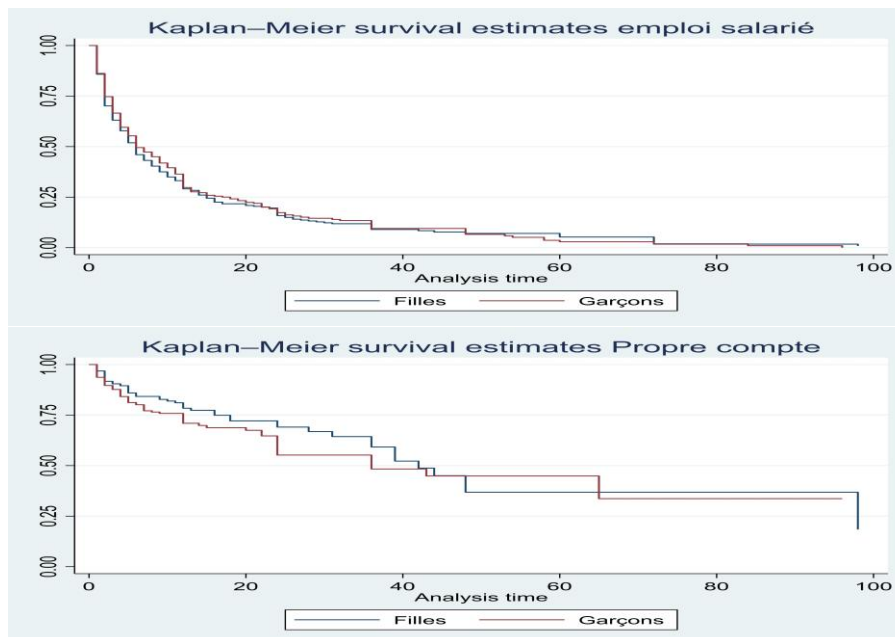
It is also mentioned that, on average, women have a shorter duration to access a salaried job than men, i.e. 9.51 months compared to 10.23 months. However, men take on average less time, 9.21 months, to set up their own business compared to women, whose average duration to self-employ is 11.43 months. It can be thought that being a man can offer more opportunities to reconcile studies with professional activities (internship or apprenticeship), it allows boys to access employment quickly compared to girls. Indeed, the transition of young girls to the labour market is most often influenced by their cultural and sociological affiliation in developing countries and in Cameroon in particular. The functions of cumulative distributions of the duration of transition to paid employment and self-employment by gender show that while boys have a higher probability of exiting the transition to wage employment earlier than women, girls have a higher probability of self-employment (Figure 1 below).

**Table 4: Work-study balance and transition time to first job**

Academic or school profile	Paid work		Employment	
	Average	Standard deviation	Average	Standard deviation
Frequent and work during studies				
Not	11.098	13.704	10.935	13.464
Yes	8.886	13.060	8.622	12.384
Courses or training courses				
Other	8.686	11.585	13.551	14.854
General Programs	11.140	12.895	11.781	14.264
Education. Humanities and Arts	9.879	12.547	13.486	13.863
Social Sciences. Business and Law	9.333	13.640	9.624	14.182
Science. Mathematics and Computer Science	11.942	13.786	10.763	13.024
Engineering and production industry	11.246	13.610	8.986	12.425
Agriculture. Health and Veterinary Science	7.938	11.555	5.500	10.601
Sex				
Wife	9.512	13.312	11.436	15.054
Man	10.238	13.504	9.210	12.531
Victim of a disability				
Is not a victim of disability	9.996	13.485	9.903	13.611
Is a victim of disability	9.133	12.674	11.293	12.822

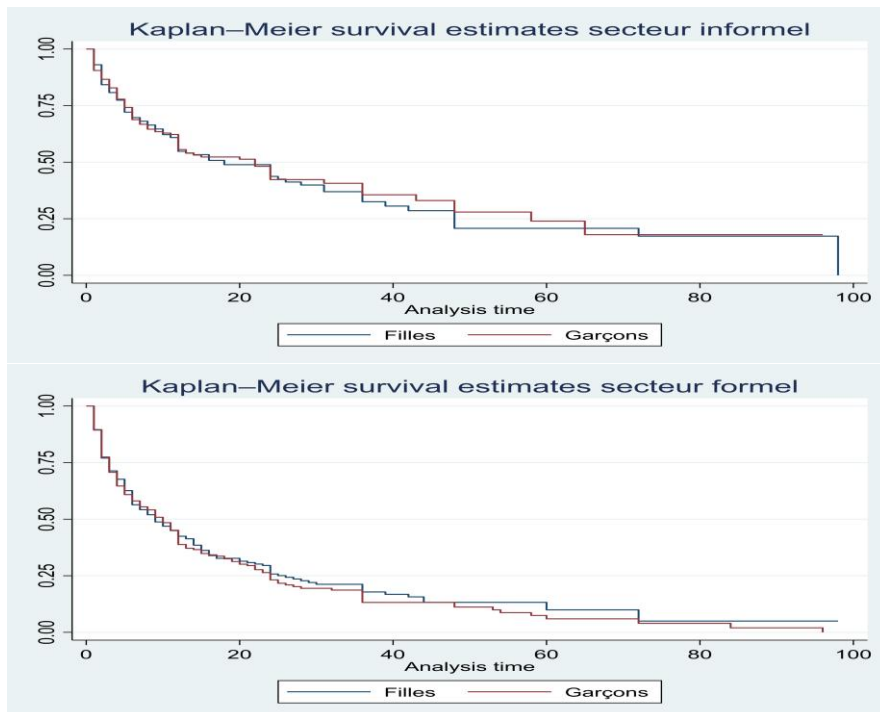
Source: Author, based on EAPE database made in 2018.

With regard to the formality of employment, Figure 2 shows that boys are more likely to have faster access to informal jobs than girls, while girls are more likely to have faster access to formal jobs than boys. In short, young people with disabilities take an average of 9 months to get a salaried job and 11.29 months to set up their own business.



Source: Author, from EAPE 2018

**Fig. 1:** Cumulative distribution function of transition time to first job by sex



Source: Author, from EAPE 2018

**Fig. 2:** Cumulative distribution function of transition time to first job by sex

## 2. Econometric analysis of the effect of reconciling education and experience on the length of time it takes for young people to transition to their first job

This section will first present the results with the selection bias taken into account by the Heckman (1979), which consists of calculating the inverse of the Mills ratio and introducing it into the concurrent duration at risk model. Secondly, we present the results of the effect of the combination of studies and experience on the duration of transition to salaried employment and to self-employment. Finally, we present the results taking into account formal and informal jobs.

### 4.1. Reconciling education and experience and the length of transition of young people to paid employment or to self-employment with selection bias taken into account

Before discussing the results of the estimation of the duration model, we present in Table 5 the validity test of the instrument, which is here the level of education of the next parent Di Falco et al (2011) Di Falco et al (2011). This instrument, which is included in the selection equation (cumulative education-experience) and is not included in the outcome equations (paid work, self-employment), is validated if the parent's level of education has a significant effect on the probability of combining education and experience, but has no effect on the transition time to paid or self-employed work. Table 2.5 below shows that at a threshold of 5%, this condition is met.

Tables 6 and 7 present the results with the introduction of the inverse of the Mills ratio to take into account a potential selection bias. These regressions show that the inverse of the Mills ratio is significant in the equations for the duration of transition from own-account salaried employment to formal and informal employment. This confirms that the fact of reconciling studies and experience does not suffer from a potential selection bias. Thus, the relationship between education and experience and the duration of transition to each labour market outcome will be estimated in competing risk duration models without taking into account the existence of a possible selection bias. Given that there may be unobserved factors that may influence both the

decision to combine education and experience and the transition time to each labour market exit, thereby causing endogeneity biases, which must be addressed in the evaluation of the efficiency of reconciling education and experience over the transition period.

**Table 5:** Device Validity Test

	Probit regression	Linear regression	
		Salaried employment	Self-employment
Parent's level of education			
Primary	Ref	Ref	Ref
High school level	0,113 (0,055) **	-0,447(0,661)	0,211 (1,217)
Upper Level	-0,043 (0,065)	-0,144(0,751)	-1,588 (1,720)
Constance	0,135 (0,035)***	4,184(0,424)***	3,683 (0,794)***
Pseudo R2/R2	0,0017	0,0004	0,00535
Device Exclusion Test	X <sup>2</sup> = 6.25**	F-stat=0.23	F-stat=0.54
Prob>F/X	0,043	0,79	0,58
Observations	2657	317	368

Source: Author, based on the 2018 EPAE database conducted by CEREg and IDRC.

Faced with the need to obtain the variable reconciliation studies-experience independent of the terms of unobserved heterogeneities contained in the durations and as Heckman et Robb Jr (1985), the probability predicted by the simple Probit model is used as instruments instead of the binary variable (education-experience balance) in estimating transition times to each labour market exit. The calculation of this predicted probability integrates the estimated parameters  $\beta_i$  and  $\varepsilon_i$ .

#### **4.2. Reconciling education and experience and the length of transition to salaried or self-employed employment**

Estimating the effect of the combination of education and experience on the transition time of young people to paid employment or to self-employment gives the results presented in Table 6 below. The first column (study-experiment) is the selection equation. Columns 2 and 3 are the results with possible selection bias and columns 4 and 5 are the results without selection bias. Table 6 shows that the most relevant result is the effect of the combination of education and experience on the length of transition to the first job. It is important to mention that the instrumental variable method we used made it possible to correct for endogeneity bias and possible selection bias of the combination of education and experience on the length of transition so that its estimated effect can be assumed to be unbiased and thus reflect only the effect of the school-experience balance on the duration of transition to the first job. However, its effect is heterogeneous depending on whether the job is salaried or not. Thus, to get a salaried job or self-employment, a first work experience during studies is essential. Indeed, the combination of education and experience reduces the transition time to salaried employment and to self-employment. Its effect, which is significantly higher on the transition to salaried employment, means that at the end of their studies, young Cameroonians first prospect for salaried jobs and it is only after several failed attempts that they decide to self-employ. However, the 2nd and 3rd frames in Table 6 show that the effect of the combination of education and experience is not significant when the endogeneity bias of the combination of education and experience on the transition time of young people is not taken into account. Even if the sign is still negative, reflecting the positive effect of the accumulation of education and experience on the duration of transition, it reflects the fact that the failure to take into account the endogeneity of the combination of education and experience tends to underestimate the effect of the reconciliation of education and experience on the duration of the transition to salaried employment and to self-employment.

**Table 6: Balance of education and experience and transition time of young people**

Variables	Equation of Selection	Employment	Employment	Employment	Employment
	Studiesexperience (Standard Deviation)	odds ratio (T-student)	odds ratio (T-student)	odds ratio (T-student)	odds ratio (T-student)
Studies-experience		0.412(-0.736)	0.0728(-0.730)	0.366(-2.038)**	0.107(-1.926)*
Ratio de Mills		1.226(0.104)	0.492(-0.117)		
Gender=Boy	0.250(0.0994)**	1.230(0.980)	1.753(1.092)	1.229(0.979)	1.763(1.088)
Age	-0.159(0.134)	0.785(-1.658)*	0.684(-0.883)	0.783(-1.678)*	0.686(-0.877)
Age2	0.261(0.221)	1.336(1.254)	1.936(1.010)	1.341(1.282)	1.925(1.003)
Married	0.116(0.170)	2.314(3.034)***	1.737(0.810)	2.312(3.040)***	1.752(0.833)
Bachelor	-0.0298(0.144)	2.240(3.753)***	1.423(0.752)	2.237(3.768)***	1.441(0.823)
Protestant	0.255(0.106)**	1.191(0.900)	2.885(2.093)**	1.194(0.923)	2.874(2.114)**
Has a child	-0.0207(0.112)	1.255(1.297)	0.376(-2.369)**	1.253(1.298)	0.378(-2.370)**
Lives with parents	-0.0481(0.106)	0.683(-2.381)**	0.554(-1.632)	0.684(-2.391)**	0.552(-1.668)*
Source of family income	-0.0909(0.109)	0.664(-2.372)**	0.844(-0.396)	0.663(-2.430)**	0.847(-0.396)
Licence	-0.203(0.117)*	0.784(-1.358)	0.575(-1.379)	0.784(-1.351)	0.574(-1.377)
Master's degree and more	-0.0316(0.137)	1.260(1.131)	0.432(-1.450)	1.258(1.135)	0.434(-1.458)
Underqualified	-0.531(0.210)**	0.773(-0.614)	0.180(-2.032)**	0.777(-0.604)	0.175(-2.103)**
Matched studies	-0.173(0.107)	1.395(1.542)	0.262(-3.216)***	1.397(1.556)	0.261(-3.215)***
Public administration	-0.0997(0.152)	1.221(0.951)	0.737(-0.588)	1.218(0.938)	0.739(-0.582)
Private or NGO (parent)	-0.242(0.162)	0.845(-0.632)	0.489(-1.189)	0.844(-0.635)	0.489(-1.195)
Micro	-0.152(0.133)	0.781(-1.170)	0.882(-0.295)	0.780(-1.172)	0.885(-0.289)
General Programs	-0.289(0.334)	0.286(-2.526)**	0.446(-0.828)	0.29(-2.579)***	0.439(-0.844)
Social Sciences, Business and Law	-0.0214(0.137)	0.642(-2.356)**	0.824(-0.331)	0.641(-2.361)**	0.826(-0.328)
Maths/Computer Science	-0.0127(0.194)	0.606(-1.525)	0.922(-0.108)	0.604(-1.538)	0.924(-0.105)
Engineering	0.174(0.168)	0.748(-1.225)	2.729(1.694)*	0.749(-1.227)	2.732(1.701)*
Never Attended	0.331(0.141)**				
Primary	0.249*(0.249)				
Lower secondary	0.0428(0.144)				
Superior	0.280(0.170)*				
Senior Executive	-0.162(0.127)	0.759(-1.197)	0.519(-1.360)	0.760(-1.197)	-1.369(0.391) *
Middle management	-0.0994(0.124)	1.204(1.058)	0.392(-1.728)*	1.205(1.060)	-1.740 (0.524)
Unemployment rate for 15-35 year olds	-0.326(0.181)*	0.518(-2.440)**	0.514(-1.056)	0.51(-2.834)***	833.7(-1.106)
Constant	4.368(2.164)**	185.8(1.326)	1.650(0.699)	236.9(1.736)*	0.714(0.785)
Log of likelihood		0.021(0.59)	-0.057(0.70)	0.021(0.59)	-0.056(0.69)
Observations	827	316	375	316	375

**Source:** Author, based on the 2018 Employment Policy Improvement (EPAE) conducted by CEREG and IDRC. \*\*\* significance at 1%; \*\* significance at 5%; \* significance at 10%. The values in parentheses are the t of student and the robust standard deviations.

Thus, ignore the problem of unobserved heterogeneity and mainly the endogeneity bias would amount to underestimating the estimated coefficient of the study-experience balance. This may also mean that youth with unobserved academic skills were less likely to work while in school, but that these same skills would have helped them reduce the length of the transition period. It is therefore clear that there is a significant and positive relationship between the education-experience variable and the instantaneous risk of successfully transitioning out of the education system, and the value of the risk rate related to reconciling studies and professional activities indicates that this rate is almost twice as high among young people who attended by carrying out a professional activity or dual training.

The significance and signs of this variable reveal the existence of a parabolic profile between work experience during studies and duration of access to the labour market, reflecting the idea that the hours spent working while studying are also a means of learning and thus improving their productivity. This result is consistent with the ideas of Bjørn et Røpke (2018b); Dedehouanou et al (2022); Manacorda et al (2017), which reflect the fact that the transition process begins for some young people while they are still in the education system (Béduwé & Cahuzac, 1997) to a certain extent the professional value of reconciling studies and experience on the transition period of young people in Cameroon.

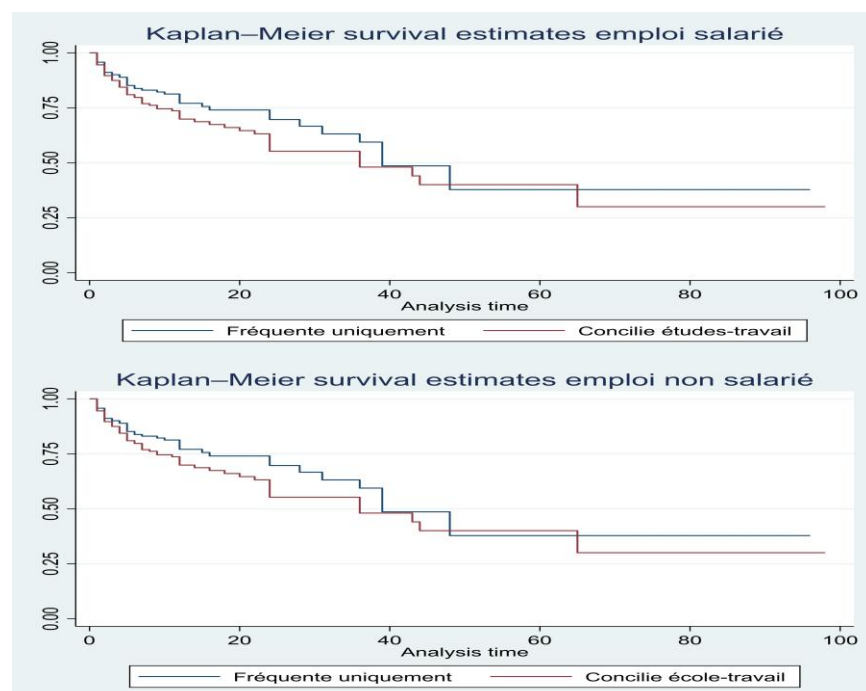
Although our analyses reveal a positive effect of the school-experience balance on the duration of the transition to the first job, the functions of cumulative distributions of the duration of the transition to the first job (see Figure 3) show, regardless of the outcome of the labour market considered, that young people who attended only attend school have a higher probability of quickly entering employment compared to young people who reconciled education and experience. This result can be explained by the fact that, during their studies, students do not always work in the jobs related to their training course. Also, several other factors, in particular, the nature of the work and the number of hours worked can be detrimental to training, and reduce to a certain extent the chances of quickly accessing employment at the end of studies. It is in this context that Béduwé et Cahuzac (1997) shows that fixed-term contracts during studies lead to fixed-term contracts and odd jobs to odd jobs. Moreover, this result could suggest that in Cameroon the recruitment process is not always based on the experience held by the job prospector.

The differences in access to the labour market according to the type of course or course of study are also noticeable in Table 2.6 More specifically, academic profiles (in particular, the general programmes, social sciences, business and law) have a positive effect and reduce the transition time of young people to a salaried job to the threshold of 1% and 5% respectively. This implies that the combination of education and experience, associated with certain types of courses or fields of training, is likely to be more beneficial in reducing the transition time to each of the outcomes. In addition, reconciling education and experience in certain training courses can be more qualifying and contribute to a better match on the labour market. However, only engineering training courses increase the transition time of young people to self-employment. This negative influence, which reflects a long transition period, shows that when they leave the education system, young people initially spend more time looking for paid work. This difference in terms of training profiles or pathways observed in the « *sheepskin effect* » in favour of obtaining salaried work and the types of diplomas is in line with the results of Pastore (2018). If the sector explains the gaps in access to employment, the effect of the non-match between training and employment is also relevant. This suggests that having work experience while studying and having some type of course or stream of attendance may be more advantageous to enter the labour market earlier, after leaving the education system. Thus confirming the predictions of the signal models, the academic paths reporting low productivity and high yields for profiles reporting high productivity are confirmed here (Golbe, 1985).

As far as the adequacy of training and employment is concerned, in Cameroon, the fact that a young person is under-educated in relation to employment and has training that matches the job greatly reduces the duration for the young person to undertake an activity as a boss or to work on his own account and the duration of transition to salaried employment. The positive effect of vertical mismatch suggests that young people in Cameroon accept certain types of jobs to gain experience so that they can prospect for more matched jobs. It also appears that having a parent of a CSP Senior Manager and Middle Manager reduces the transition time to self-employment and to salaried employment respectively. For example, it can be read that having a mother who has worked in the public administration, and in the private sector or in NGOs and in a micro-enterprise has no effect on the length of transition to salaried employment and self-employment. Surprisingly, our results show a positive and highly significant effect of a young person living with his or her parents on the duration of the transition to salaried employment and self-employment. However, having the financial support of his or her parents reduces the length of time he or she has made the transition to paid employment and has no effect on the transition to self-employment.

When looking at sociodemographic or individual characteristics, the results of the regression of the concurrent duration at risk model with unobserved heterogeneity, presented in Table 1.6, show significant heterogeneous effects of work during education by age and marital status. It shows that age has a significant effect and reduces the time it takes to leave the transition to paid employment, but has no effect on the length of transition to own-account employment. Table 1.6 also shows that being married, unmarried or in a common-law union increases the duration of transition to paid employment (permanent or fixed-term employment) but has no effect on the duration of transition to self-employment. And as far as labour market characteristics are concerned, the low unemployment rates of 3.8% in Cameroon have no effect on the duration of transition to self-employment, but greatly reduce the duration of access to salaried employment.

It is noted that there is a non-significant relationship between gender and the probability of exiting unemployment, however, compared to women, being male increases the length of transition to paid employment and self-employment. This would suggest that the type of professional activities carried out during studies by men may be more conducive to their subsequent transition compared to women, or that the local environment may be more favourable to men than women in valuing the skills acquired during professional experiences during studies. For example, women are more likely than men to take care of maternity and household chores, and the conditions of access to the labour market may be more discriminatory for young women, so that any skills or experience accumulated are less useful in the firm.



Source: Author, from the Improvement of Employment Policies (EPAE) database.

**Fig. 3:** Cumulative distribution function of transition time to first job by whether youth balance work and education

### 4.3. Reconciling education and experience and the length of transition to formal or informal employment

In order to verify whether our results are stable, in this section we evaluate the effect of the combination of education and experience on the duration of transition to salaried or non-salaried employment, but on the duration of transition to formal or informal employment. Thus, Table 7 presents the effect of the combination of education and experience on the duration of transition to formal or informal employment.

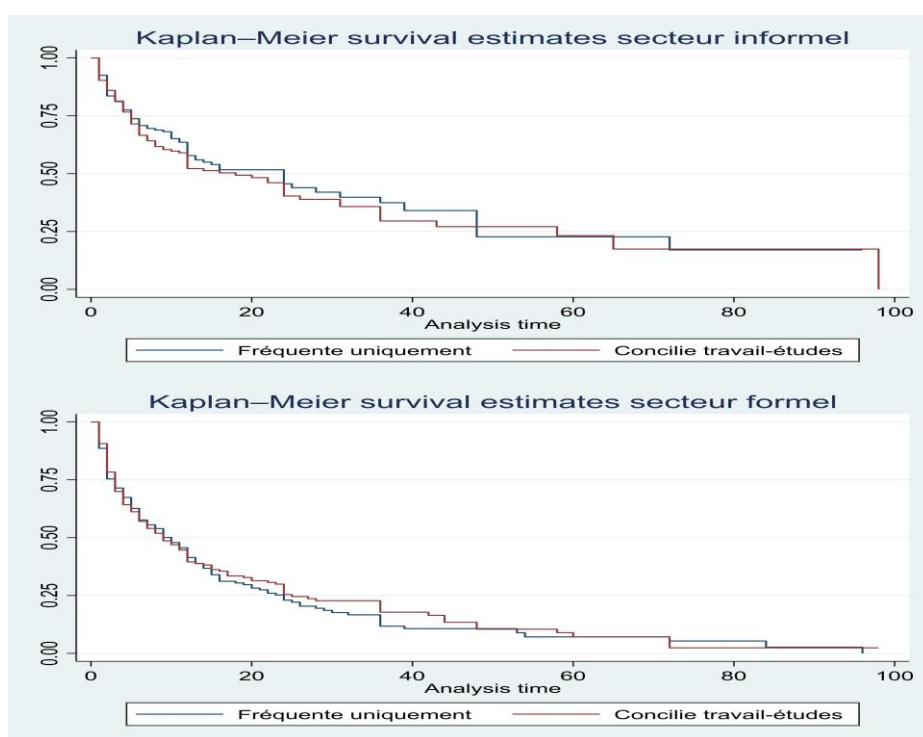
**Table 7: Combination of education and experience and duration of access to formal and non-formal employment**

Variables	Selection equation	Emploi formula	Non-formal employment	Emploi formula	Non-formal employment
	Coefficient (StandardDeviation)	odds ratio (T-student)	odds ratio (T-student)	odds ratio (T-student)	odds ratio (T-student)
studies-experience		0.0150(-1.824)*	1.768(0.379)	0.264(-1.698)*	0.282(-2.163)**
Ratio de Mills		0.00661(-1.348)	25.26(1.285)		
Gender=Boy	0.250(0.0994)**	1.246(0.705)	1.420(1.386)	1.257(0.723)	1.407(1.353)
Age	-0.159(0.134)	0.978(-0.0679)	0.696(-2.142)**	1.031(0.0878)	0.677(-2.335)**
Age2	0.261(0.221)	0.964(-0.0707)	1.662(1.926)*	0.870(-0.258)	1.753(2.161)**
Married	0.116(0.170)	2.448(2.294)**	2.140(2.166)**	2.586(2.428)**	2.123(2.146)**
Bachelor	-0.0298(0.144)	1.393(1.025)	2.611(3.723)***	1.487(1.241)	2.559(3.658)***
Protestant	0.255(0.106)**	1.379(0.956)	1.453(1.579)	1.304(0.783)	1.498(1.729)*
Has a child	-0.0207(0.112)	0.787(-0.775)	1.189(0.872)	0.822(-0.648)	1.167(0.778)
Lives with parents	-0.0481(0.106)	0.833(-0.753)	0.560(-3.165)***	0.805(-0.903)	0.577(-3.057)***
Source of family income	-0.0909(0.109)	0.781(-0.863)	0.670(-2.003)**	0.814(-0.719)	0.646(-2.211)**
Licence	-0.203(0.117)*	0.842(-0.636)	0.646(-2.110)**	0.828(-0.698)	0.650(-2.067)**
Master's degree and more	-0.0316(0.137)	0.671(-1.087)	1.282(1.086)	0.677(-1.059)	1.262(1.016)
Underqualified	-0.531(0.210)**	0.301(-1.946)*	0.745(-0.611)	0.258(-2.246)**	0.807(-0.450)
Matched studies	-0.173(0.107)	0.695(-1.270)	1.252(0.888)	0.675(-1.367)	1.290(1.005)
Public administration	-0.0997(0.152)	0.822(-0.562)	1.326(1.110)	0.861(-0.428)	1.290(1.003)
Private or NGO (parent)	-0.242(0.162)	0.560(-1.518)	0.899(-0.327)	0.574(-1.464)	0.889(-0.361)
Micro	-0.152(0.133)	0.750(-1.018)	0.817(-0.752)	0.781(-0.873)	0.800(-0.835)
General Programs	-0.289(0.334)	0.289(-1.737)*	0.325(-2.093)**	0.253(-1.906)*	0.365(-1.934)*
Sciences Social, business and law	-0.0214(0.137)	0.433(-2.718)***	0.907(-0.395)	0.451(-2.591)***	0.892(-0.461)
Maths/Computer Science	-0.0127(0.194)	0.443(-1.803)*	0.958(-0.117)	0.467(-1.684)*	0.908(-0.256)
Engineering	0.174(0.168)	0.916(-0.240)	1.023(0.0777)	0.906(-0.265)	1.043(0.147)
Never Attended	0.331(0.141)**				
Primary	0.249(0.135)*				
Lower secondary	0.0428(0.144)				
Superior	0.280(0.170)*				
Senior Executive	-0.162(0.127)	0.601(-1.533)	0.740(-1.154)	0.586(-1.600)	0.765(-1.033)
Middle management	-0.0994(0.124)	0.727(-1.099)	1.285(1.134)	0.716(-1.141)	1.286(1.132)
Unemployment rate for 15-35 year olds	-0.326(0.181)*	0.278(-2.858)***	0.723(-0.960)	0.358(-2.736)***	0.625(-1.316)
Constant	4.368(2.164)**	17.263(1.237)	9.042(0.461)	43.04(0.582)	360.7(1.520)
Log of likelihood		-0.046(0.84)	0.026(0.60)	-0.043(0.79)	0.024(0.56)
Observations	827	389	438	389	438

**Source:** Author, based on the 2018 Employment Policy Improvement (EPAE) conducted by CERE and IDRC. \*\*\* significance at 1%; \*\* significance at 5%; \* significance at 10%. The values in parentheses are the t of student and the robust standard deviations.

Columns 1, 2 and 3 present the results with selection bias and columns 4 and 5 show the effect of cumulative education-experience without selection bias. As with the transition to salaried or non-salaried employment, there is no problem of selection bias in the reconciliation of education and experience on the transition time of young people to formal or informal work.

As found above, the combination of education and experience also reduces the transition time of young people to formal and informal employment. However, its effect, which is higher on the duration of transition to informal employment than on the duration of transition to formal employment, could reflect the fact that in Cameroon, young people accept informal jobs to gain experience, which will allow them to get a job in the formal sector of the economy. In addition, Figure 4 shows that young people who have attended only education are more likely to find a job in the informal sector quickly compared to young people who have accumulated education and experience. Curiously, this same graph shows that young people who have a combination of education and experience are more likely to find a job in the formal sector quickly. This supports the thesis that the effect of work during studies is strongly dependent on the nature of the work and its correlation with the field or field of training.



Source: Author, from the Improvement of Employment Policies (EPAE) database.

**Fig. 4:** Cumulative distribution of the transition time to the first job by whether the young person balances work and studies

In terms of the field of training, it shows that general programmes have a positive influence on the length of transition to formal and informal employment. The social sciences business and law and the mathematics and computer science courses reduce the transition time to formal employment, and have no effect on the transition time to informal employment. The fact that a young person lives with his or her parents and receives financial support from their parents has a positive influence on the transition time to informal employment and has no effect on the transition duration of transition to formal employment. This result goes against the theoretical predictions that the reservation wage has the effect of extending the transition time of young people. Indeed, in Cameroon, from a certain age, young people no longer receive financial assistance from their parents and are forced to sign employment contracts in the informal sector of the economy in order to take care of their daily expenses.

With regard to other characteristics, it appears that being married increases the transition time to formal and informal employment. But single status significantly increases the transition time to informal employment and does not affect the transition time to formal employment. With regard to other labour market characteristics, low unemployment rates reduce the transition time to formal work and have no effect on the transition time to informal work.

#### 4.4. Analysis of the robustness of the combination of education and experience and the length of transition of young people

Table 8 presents the results of the analysis of the robustness of the effect of the school-experience balance on the duration of the transition to paid employment and to self-employment, and Table 9 in the appendix presents the analysis of the effect of the school-experience balance on the duration of transition to formal or non-formal employment.

**Table 8: Analysis of the robustness of the accumulation of education and experience and transition time**

VARIABLES	Equation of selection	Employment living room-Laugh	Employment	Employment	Employment
	Studies-experience (Standard Deviation)	odds ratio (T-student)	odds ratio (T-student)	odds ratio (T-student)	odds ratio (T-student)
Studies-experience		0.412(-0.736)	0.0728(-0.730)	0.366(-2.038)**	0.107(-1.926)*
Ratio de Mills		1.226(0.104)	0.492(-0.117)		
Gender=Boy	0.250(0.0994)**	1.230(0.980)	1.753(1.092)	1.229(0.979)	1.763(1.088)
Age	-0.159(0.134)	0.785(-1.658)*	0.684(-0.883)	0.783(-1.678)*	0.686(-0.877)
Age2	0.261(0.221)	1.336(1.254)	1.936(1.010)	1.341(1.282)	1.925(1.003)
Married	0.116(0.170)	2.314(3.034)***	1.737(0.810)	2.312(3.040)***	1.752(0.833)
Bachelor	-0.0298(0.144)	2.240(3.753)***	1.423(0.752)	2.237(3.768)***	1.441(0.823)
Protestant	0.255(0.106)**	1.191(0.900)	2.885(2.093)**	1.194(0.923)	2.874(2.114)**
Has a child	-0.0207(0.112)	1.255(1.297)	0.376(-2.369)**	1.253(1.298)	0.378(-2.370)**
Lives with parents	-0.0481(0.106)	0.683(-2.381)**	0.554(-1.632)	0.684(-2.391)**	0.552(-1.668)*
Source of family income	-0.0909(0.109)	0.664(-2.372)**	0.844(-0.396)	0.663(-2.430)**	0.847(-0.396)
Licence	-0.203(0.117)*	0.784(-1.358)	0.575(-1.379)	0.784(-1.351)	0.574(-1.377)
Master's degree and more	-0.0316(0.137)	1.260(1.131)	0.432(-1.450)	1.258(1.135)	0.434(-1.458)
Underqualified	-0.531(0.210)**	0.773(-0.614)	0.180(-2.032)**	0.777(-0.604)	0.175(-2.103)**
Matched studies	-0.173(0.107)	1.395(1.542)	0.262(-3.216)***	1.397(1.556)	0.261(-3.215)***
Public administration	-0.0997(0.152)	1.221(0.951)	0.737(-0.588)	1.218(0.938)	0.739(-0.582)
Private or NGO (parent)	-0.242(0.162)	0.845(-0.632)	0.489(-1.189)	0.844(-0.635)	0.489(-1.195)
Micro	-0.152(0.133)	0.781(-1.170)	0.882(-0.295)	0.780(-1.172)	0.885(-0.289)
General Programs	-0.289(0.334)	0.286(-2.526)**	0.446(-0.828)	0.288(-2.579)***	0.439(-0.844)
Social Sciences. Business and Law	-0.0214(0.137)	0.642(-2.356)**	0.824(-0.331)	0.641(-2.361)**	0.826(-0.328)
Maths/Computer Science	-0.0127(0.194)	0.606(-1.525)	0.922(-0.108)	0.604(-1.538)	0.924(-0.105)
Engineering	0.174(0.168)	0.748(-1.225)	2.729(1.694)*	0.749(-1.227)	2.732(1.701)*
Never Attended	0.331(0.141)**				
Primary	0.249(0.135)*				
Lower secondary	0.0428(0.144)				
Superior	0.280*(0.170)				
Senior Executive	-0.162(0.127)	0.759(-1.197)	0.519(-1.360)	0.760(-1.197)	0.391(-1.369) *
Middle management	-0.0994(0.124)	1.204(1.058)	0.392(-1.728)*	1.205(1.060)	0.524 (-1.740)
Unemployment rate for 15-35 year olds	-0.326(0.181)*	0.518(-2.440)**	0.514(-1.056)	0.512(-2.834)***	833.7(-1.106)
Constant	4.368(2.164)**	1.858(1.326)	1.650(0.699)	236.9(1.736)*	1.214(0.785)
Log of likelihood		0.021(0.59)	-0.057(0.70)	0.021(0.59)	-0.056(0.69)
Observations	827	316	375	316	375

Source : Author, based on the 2018 Employment Policy Improvement (EPAE) conducted by CEREg and IDRC. \*\*\* significance at 1%; \*\* significance at 5%; \* significance at 10%. The values in parentheses are the t of student and the robust standard deviations.

This result is achieved by no longer using the Weibull law but rather the exponential law. Indeed, contrary to Heckman and Singer (1984b) who shows through an estimation by the gamma law, that the use of a parametric form can have a significant impact on the results, we use the exponential law which has a more flexible distribution in the same way as the gamma law. In practice, unobservable heterogeneity can be defined by the technique of support points, but this method is as arbitrary as the use of the exponential distribution. Abbring et al (2001) provide a more interesting illustration of this by using the gamma function *ex post*. As a result, given the small size of our sample, the heterogeneity distribution of job prospectors still at risk (who are seeking to access the labor market) estimated by the Weibull law can quickly converge towards an exponential distribution.

These results are qualitatively similar to those presented in Tables 6 and 7 above. Specifically, the effect of the academic profile previously estimated by a weibull distribution on the transition time to paid employment or to self-employment remained stable. This effect is still significant and always reduces the transition time to salaried employment, self-employment, formal and informal employment.

A disaggregation by field or field of study shows that the effect is still stable with regard to the significance threshold and the sign of the fields of study in education and general programmes, social sciences, business and law and engineering. It can also be seen that the results in Tables 8 and 9 in the appendix have remained unchanged for young people who live with their parents and receive financial assistance from their parents. Also, as far as individual characteristics are concerned, it must be noted that our results remained unchanged for the variables being married, being single, underqualified in relation to employment, matched to employment in terms of influence threshold and monkey. Overall, our results remained stable for all variables used to analyze the effect of the combination of education and experience on the duration of transition to salaried, self-employed, formal and informal employment.

## **5. Conclusion**

The objective of this paper was to evaluate the economic effect of reconciling education and experience on the length of the transition of young people to salaried employment on the one hand and to self-employment on the other. Our analysis focused on young people who, during their school years, were either on an internship or in the course of an apprenticeship. We assessed the effect of reconciling education and experience on the length of transition to salaried, self-employed, formal and informal employment. Among the possible (*a priori*) undetermined effects on the transition period, it appears that the fact that a young person reconciles studies and professional activities can to some extent help the young person to acquire a first work experience before leaving the education system. This allows the student to become familiar with the barriers to youth employment that are addressed in most post-graduation intervention policies, given that current youth employment policies consist of several after-school programmes and projects. More specifically, it is at the end of the education system that young people receive training and acquire the experience that allows them to acquire specific know-how that is appreciated by the employer. Interventions in terms of economic policies must be reoriented towards policies to strengthen the links between universities and the labour market, which encourage young people still in the education system to engage in professional activities on the one hand. On the other hand, further studies on the types of work performed by boys and girls as well as interventions to reduce labour market constraints (during and after schooling) for women should be considered. Otherwise, similar policies could encourage the widening of the gender gap in the transition time of young people.

Our multi-equation modelling, which takes into account possible endogeneity and selection biases, adds to the rare literature on the effects of the accumulation of studies and experience on the transition time. Our results show that reconciling studies and experience reduces the transition time to all labour market outcomes in Cameroon. Here we find the results of Nilsson (2015) and Manacorda et al (2017). More relevant is the effect of the training course. Indeed, the fact that a young person has attended the general curriculum, social sciences, business and law reduces the length of time he or she has transitioned to salaried and formal jobs. However, engineering cycles increase the transition time to self-employment and have no effect on the

transition time to self-employment. Although not significant, it reduces the transition time to wage and formal employment. These results are in line with the conclusions of the work on the effect of education pathways in relation to the labour market (Lorentzen et al, 2019; Quintini and Manfredi, 2009). As far as the adequacy of training and employment is concerned, the fact that a young person has a training course adapted to the job greatly reduces the transition time to salaried, self-employed and formal employment.

The effects of training pathways or parchment effect are observed for young people who worked during their years of schooling and for those who followed a type of training stream, with significant differences in the length of transition to either salaried or non-salaried employment and informal or formal employment. While these results are partly in line with those of Dedehouanou et al (2022) of Nilsson (2015) of Björn et al (2016) and Manacorda et al (2017), however, they do not allow us to reject the postulate of a signal on the labour market in Cameroon. Such a result reflects the need to explore other elements of explanation for the importance for a student to seek a first work experience during his or her studies or to reconcile studies and experience. The results presented in this chapter provide useful information for the implementation of effective employment policies that can accelerate the transition of young people to wage, formal and self-employment jobs. The results draw attention to the importance of temporary employment experiences for youth during studies and of expanded school programs including apprenticeships.

The policy implications regarding the change or reorientation of existing strategies to address youth unemployment in Cameroon are clear. Existing programmes/projects address youth unemployment after they have completed school, providing them with training and skills that are only valued by employers after graduation. Employment policies need to be reoriented or expanded to promote young people's engagement in well-designed work experiences at school. To extend the benefits of these programs to women, more research is needed on the type of academic work being done. Finally, interventions should be designed to reduce the proportion of young people seeking employment through informal channels.

## Annexes

**Table 9:** Analysis of the robustness of the accumulation of education and experience and transition duration

VARIABLES	Equation of selection	Emploi formula	Non-formal employment	Emploi formula	Non-formal employment
	Coefficient(Ecart-type)	odds ratio(T-student)	odds ratio(T-student)	odds ratio(T-student)	odds ratio(T-student)
Studies-experience		0.0143(-1.811)*	1.793(0.394)	0.750(-1.128)	0.292(-2.164)**
Ratio de Mills		0.00697(-1.312)	24.311.290)		
Gender=Boy	0.250(0.0994)**	1.270(0.748)	1.411(1.387)	1.279(0.762)	1.399(1.353)
Age	-0.159(0.134)	0.962(-0.114)	0.704(-2.127)**	1.014(0.0414)	0.684(-2.327)**
Age2	0.261(0.221)	0.985(-0.0285)	1.638(1.908)*	0.890(-0.215)	1.728(2.150)**
Married	0.116(0.170)	2.580(2.400)**	2.088(2.181)**	2.718(2.527)**	2.075(2.159)**
Bachelor	-0.0298(0.144)	1.449(1.158)	2.549(3.778)***	1.544(1.370)	2.502(3.706)***
Protestant	0.255(0.106)**	1.399(0.975)	1.441(1.581)	1.323(0.808)	1.486(1.734)*
Has a child	-0.0207(0.112)	0.789(-0.748)	1.189(0.887)	0.824(-0.625)	1.166(0.791)
Lives with parents	-0.0481(0.106)	0.814(-0.838)	0.569(-3.198)***	0.787(-0.991)	0.585(-3.084)***
Source of family income	-0.0909(0.109)	0.770(-0.893)	0.679(-1.989)**	0.803(-0.754)	0.654(-2.205)**
Licence	-0.203(0.117)*	0.827(-0.688)	0.651(-2.117)**	0.813(-0.746)	0.655(-2.076)**
Master's degree and more	-0.0316(0.137)	0.674(-1.054)	1.275(1.084)	0.680(-1.031)	1.256(1.012)
Underqualified	-0.531(0.210)**	0.289(-1.963)**	0.758(-0.588)	0.248(-2.253)**	0.819(-0.428)
Matched studies	-0.173(0.107)	0.694(-1.246)	1.249(0.894)	0.674(-1.342)	1.2861.010)
Public administration	-0.0997(0.152)	0.826(-0.537)	1.318(1.098)	0.866(-0.406)	1.284(0.993)
Private or NGO (parent)	-0.242(0.162)	0.551(-1.527)	0.901(-0.323)	0.566(-1.471)	0.892(-0.357)
Micro enterprise	-0.152(0.133)	0.743(-1.030)	0.820(-0.754)	0.774(-0.886)	0.803(-0.836)
General Programs	-0.289(0.334)	0.269(-1.871)*	0.336(-2.087)**	0.236(-2.033)**	0.376(-1.923)*

Social Sciences, Business and Law	-0.0214(0.137)	0.424(-2.761)***	0.916(-0.363)	0.442(-2.627)***	0.902(-0.429)
Maths/Computer Science	-0.0127(0.194)	0.436(-1.811)*	0.966(-0.0942)	0.460(-1.692)*	0.917(-0.234)
Engineering	0.174(0.168)	0.915(-0.239)	1.022(0.0764)	0.907(-0.257)	1.043(0.149)
Never Attended	0.331(0.141)**				
Primary	0.249(0.135)*				
Lower secondary	0.0428(0.144)				
Superior	0.280(0.170)*				
Senior Executive	-0.162(0.127)	0.587(-1.576)	0.750(-1.128)	0.572(-1.650)*	0.775(-1.008)
Middle management	-0.0994(0.124)	0.729(-1.065)	1.284(1.151)	0.718(-1.108)	1.285(1.147)
Unemployment rate for 15-35 year olds	-0.326(0.181)*	0.267(-2.914)***	0.735(-0.931)	0.343(-2.839)***	0.636(-1.304)
Constant	4.368(2.164)**	24.171(1.262)	7.531(0.431)	63.49(0.638)	293.1(1.506)
Observations	827	389	438	389	438

Source : Author, based on the 2018 Employment Policy Improvement (EPAE) conducted by CEREg and IDRC. \*\*\* significance at 1%; \*\* significance at 5%; \* significance at 10%. The values in parentheses are the t of student and the robust standard deviations.

## References

- Afrobaromètre. (2015). *Par Où Commencer ? Concilier Les Objectifs de Développement Durable et Les Priorités Populaires*. Dépêche, n°67-17.
- Akono, C. Z., & Nanfosso, R. T. (2013). Private returns to education in urban Cameroon. *Business and Economic Research*, 3(2), 23.
- Assaad, R., & Krafft, C. (2014). *Youth transitions in Egypt : School, work, and family formation in an era of changing opportunities*. Silatech Working Paper No. 14. <https://www.silatech.org/wp-content/uploads/2018/12/youth-transitions-in-egypt-school-work-and-family-formation-in-an-era-of-changing-opportunities.pdf>
- Baert, B. S., Neyt, B., Omev, E., & Verhaest, D. (2022). Student work during secondary education, educational achievement, and later employment : A dynamic approach. *Empirical Economics*, 63(3), 1605-1635. <https://doi.org/10.1007/s00181-021-02172-7>
- Becker, G. (1964). *Human Capital, NY; GS Becker*.
- Bédoué, C., & Cahuzac, E. (1997). Première expérience professionnelle avant le diplôme. Quelle insertion pour les étudiants de second cycle universitaire? *Formation Emploi*, 58(1), 89-108.
- Bédoué, C., & Espinasse, J.-M. (1996). Concurrence entre générations et accès à l'emploi des jeunes. *Formation emploi*, 55(1), 19-38.
- BIT,. (2015a). *Tendances Mondiales de l'Emploi des Jeunes, Bureau International du Travail*. BIT.
- Bjørn, A., & Røpke, I. (2018a). What does it really mean to be a strongly sustainable company?—A response to Nikolaou and Tsalis. *Journal of Cleaner Production*, 198, 208-214.
- Bjørn, A., & Røpke, I. (2018b). What does it really mean to be a strongly sustainable company?—A response to Nikolaou and Tsalis. *Journal of Cleaner Production*, 198, 208-214.
- Björn, P. M., Aro, M. T., Koponen, T. K., Fuchs, L. S., & Fuchs, D. H. (2016). The Many Faces of Special Education Within RTI Frameworks in the United States and Finland. *Learning Disability Quarterly*, 39(1), 58-66. <https://doi.org/10.1177/0731948715594787>
- Boutin, D. (2010). La transition des jeunes camerounais vers le marché du travail. *Document de travail, DT, 152*, 2010.
- Calvo-Armengol, A., & Jackson, M. O. (2004). The effects of social networks on employment and inequality. *American economic review*, 94(3), 426-454.
- Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics : Methods and applications*. Cambridge university press. <https://books.google.com/books?hl=fr&lr=&id=TdlKAgAAQBAJ&oi=fnd&pg=PP1&dq=Cameron+et+Trivedi,+2005+&ots=yLcnN-7Gtt&sig=6pSKSji2IXvABjnsBTmqXGgvwMg>

- Caves, K. M., Ghisletta, A., Kemper, J. M., McDonald, P., & Renold, U. (2021). Meeting in the middle : TVET programs' education–Employment linkage at different stages of development. *Social Sciences*, 10(6), 220.
- Dedehouanou, S. F. A., Tiberti, L., Houeninvo, G. H., & Monwanou, D. I. (2022). Working while studying : Employment premium or penalty for youth? *Journal of International Development*, 34(2), 415-441. <https://doi.org/10.1002/jid.3605>
- Di Falco, S., Veronesi, M., & Yesuf, M. (2011). Does Adaptation to Climate Change Provide Food Security? A Micro-Perspective from Ethiopia. *American Journal of Agricultural Economics*, 93(3), 829-846. <https://doi.org/10.1093/ajae/aar006>
- Elder, S., de Haas, H., Principi, M., & Schewel, K. (2015). *Youth and rural development : Evidence from 25 school-to-work transition surveys*. ILO Geneva, Switzerland. <http://fiscalresearchcenter.issuelab.org/resources/22479/22479.pdf>
- Epple, D., & Romano, R. E. (1998). Competition between private and public schools, vouchers, and peer-group effects. *American Economic Review*, 33-62.
- Fares, J., Guarcello, L., Manacorda, M., Rosati, F. C., Lyon, S., & Valdivia, C. A. (2005). School to work transition in Sub-Saharan Africa : An overview. *Understanding Children's Work Programme Working Paper*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1780265](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1780265)
- Fomba Kamga, B. (2019). *Rapport général de l'étude : Améliorer les politiques d'emploi des jeunes en Afrique subsaharienne*. <https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/58348/IDL-58348.pdf>
- Garcia, M., & Fares, J. (2008). Transitions to working life for Africa's youth. *Youth in Africa's labor market*, 15-25.
- Geel, R., & Backes-Gellner, U. (2012). Earning While Learning : When and How Student Employment is Beneficial. *LABOUR*, 26(3), 313-340. <https://doi.org/10.1111/j.1467-9914.2012.00548.x>
- Golbe, D. L. (1985). Imperfect signalling, affirmative action, and black-white wage differentials. *Southern Economic Journal*, 842-848.
- Heckman, J. J. (1976). The common structure of statistical models of truncation, sample selection and limited dependent variables and a simple estimator for such models. In *Annals of economic and social measurement, volume 5, number 4* (p. 475-492). NBER. <https://www.nber.org/system/files/chapters/c10491/c10491.pdf>
- Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica: Journal of the econometric society*, 153-161.
- Heckman, J. J., & Robb Jr, R. (1985). Alternative methods for evaluating the impact of interventions : An overview. *Journal of econometrics*, 30(1-2), 239-267.
- Hotz, V. J., Xu, L. C., Tienda, M., & Ahituv, A. (2002). Are there returns to the wages of young men from working while in school? *Review of Economics and statistics*, 84(2), 221-236.
- INS,. (2014). *Rapport—Quatrième Enquête Camerounaise Auprès des Ménages (2014)*, Institut National des Statistiques. INS.
- Jenkins, P. H. (1997). School Delinquency and the School Social Bond. *Journal of Research in Crime and Delinquency*, 34(3), 337-367. <https://doi.org/10.1177/0022427897034003003>
- Kamga, A. K. (2011). *How Much Work Is Too Much? Impact of Child Work Hours on Schooling—Evidence of Cameroon*. [https://www.researchgate.net/profile/Arline-Kamga-2/publication/266050491\\_How\\_Much\\_Work\\_Is\\_Too\\_Much\\_Impact\\_of\\_Child\\_Work\\_Hours\\_on\\_Schooling\\_-\\_Evidence\\_of\\_Cameroon/links/5427c0690cf26120b7b36425/How-Much-Work-Is-Too-Much-Impact-of-Child-Work-Hours-on-Schooling-Evidence-of-Cameroon](https://www.researchgate.net/profile/Arline-Kamga-2/publication/266050491_How_Much_Work_Is_Too_Much_Impact_of_Child_Work_Hours_on_Schooling_-_Evidence_of_Cameroon/links/5427c0690cf26120b7b36425/How-Much-Work-Is-Too-Much-Impact-of-Child-Work-Hours-on-Schooling-Evidence-of-Cameroon)
- Lancaster, T. (1990). *The econometric analysis of transition data*. Cambridge university press. [https://books.google.com/books?hl=fr&lr=&id=\\_niziChO9k0C&oi=fnd&pg=PR11&dq=Lancaster,+T.+1990,+The+econometric+analysis+of+transition+data,+17,+Cambridge+university+press.&ots=HSSmwLGFfi&sig=zSgv9D\\_QwoWPr0RCt1UX-0oyf9A](https://books.google.com/books?hl=fr&lr=&id=_niziChO9k0C&oi=fnd&pg=PR11&dq=Lancaster,+T.+1990,+The+econometric+analysis+of+transition+data,+17,+Cambridge+university+press.&ots=HSSmwLGFfi&sig=zSgv9D_QwoWPr0RCt1UX-0oyf9A)

- Lankford, H., & Wyckoff, J. (1992). Primary and secondary school choice among public and religious alternatives. *Economics of Education review*, 11(4), 317-337.
- Lee, L.-F. (1983). Generalized econometric models with selectivity. *Econometrica: Journal of the Econometric Society*, 507-512.
- Lewis, H. G. (1974). Comments on Selectivity Biases in Wage Comparisons. *Journal of Political Economy*, 82(6), 1145-1155. <https://doi.org/10.1086/260268>
- Light, A. (2001). In-School Work Experience and the Returns to Schooling. *Journal of Labor Economics*, 19(1), 65-93. <https://doi.org/10.1086/209980>
- Light, P. C. (1998). *Sustaining innovation : Creating nonprofit and government organizations that innovate naturally*. Jossey-Bass. <https://nyuscholars.nyu.edu/en/publications/sustaining-innovation-creating-nonprofit-and-government-organizat>
- Lorentzen, T., Bäckman, O., Ilmakunnas, I., & Kauppinen, T. (2019). Pathways to Adulthood : Sequences in the School-to-Work Transition in Finland, Norway and Sweden. *Social Indicators Research*, 141(3), 1285-1305. <https://doi.org/10.1007/s11205-018-1877-4>
- Manacorda, M., Rosati, F. C., Ranzani, M., & Dachille, G. (2017). Pathways from school to work in the developing world. *IZA Journal of Labor & Development*, 6(1), 1. <https://doi.org/10.1186/s40175-016-0067-5>
- Matsumoto, M., & Elder, S. (2010). *Characterizing the school-to-work transitions of young men and women : Evidence from the ILO school-to-work transition surveys*. International Labour Organization. <https://econpapers.repec.org/paper/iloilowps/994572743402676.htm>
- McFadden, D. (1981). Econometric models of probabilistic choice. *Structural analysis of discrete data with econometric applications*, 198272. <http://www.its.caltech.edu/~mshum/gradio/McFaddenChapter1981.pdf>
- Meyer-Adams, N., & Conner, B. T. (2008). School violence : Bullying behaviors and the psychosocial school environment in middle schools. *Children & schools*, 30(4), 211-221.
- Mincer, J. (1974). *Schooling, Experience, and Earnings*. *Human Behavior & Social Institutions No. 2*. <https://eric.ed.gov/?id=ED103621>
- Mincer, J., & Polachek, S. (1974). Family Investments in Human Capital : Earnings of Women. *Journal of Political Economy*, 82(2, Part 2), S76-S108. <https://doi.org/10.1086/260293>
- Ngoko, E. H., Zamo Akono, C., Fomba Kamga, B., & Abessolo, Y. A. (2022). «L’impact du travail salarié étudiant sur le redoublement universitaire au cameroun». *Cahiers du Cedimes*, 17(1), 251-280.
- Nilsson, B. (2015). Does the work-study combination among youth improve the transition path. *Work4youth technical brief. Ginebra: OIT*. <https://www.voced.edu.au/content/ngv:70714>
- Nilsson, B. (2016). *Does the work-study combination among youth improve the transition path? : An updated review*. <https://www.voced.edu.au/content/ngv:74202>
- Oumba, P. (2016). La problématique du travail décent en Afrique à la lumière des normes de l’OIT. *Café socio-anthropologique" Le travail dans tous ses états"*. <https://hal.science/hal-01319736/>
- Passaretta, G., & Triventi, M. (2015). Work experience during higher education and post-graduation occupational outcomes : A comparative study on four European countries. *International Journal of Comparative Sociology*, 56(3-4), 232-253. <https://doi.org/10.1177/0020715215587772>
- Pastore, M. (2018). Overlapping : A R package for estimating overlapping in empirical distributions. *Journal of Open Source Software*, 3(32), 1023.
- Quintini, G., & Manfredi, T. (2009). *Going separate ways? School-to-work transitions in the United States and Europe*. [https://www.oecd-ilibrary.org/social-issues-migration-health/going-separate-ways-school-to-work-transitions-in-the-united-states-and-europe\\_221717700447](https://www.oecd-ilibrary.org/social-issues-migration-health/going-separate-ways-school-to-work-transitions-in-the-united-states-and-europe_221717700447)
- Robert, P., & Saar, E. (2012). Learning and working : The impact of the ‘double status position’ on the labour market entry process of graduates in CEE countries. *European Sociological Review*, 28(6), 742-754.

- Roy, A. D. (1951). Some thoughts on the distribution of earnings. *Oxford economic papers*, 3(2), 135-146.
- Sabatier\*, M. (2003). Stratégies d'insertion et durée d'accès au premier emploi une analyse microéconométrique sur le Panel téléphonique du CEREQ (1989-93). *Revue d'économie politique*, 113(5), 671-696.
- Sanchez-Gelabert, A., Figueroa, M., & Elias, M. (2017). Working whilst studying in higher education : The impact of the economic crisis on academic and labour market success. *European Journal of Education*, 52(2), 232-245. <https://doi.org/10.1111/ejed.12212>
- Totouom, A., Mboutchouang, V. D. P., & Kaffo Fotio, H. (2018). The Effects of Education on Labour Force Participation in Cameroon: A Gender Perspective. *African Development Review*, 30(1), 45-55. <https://doi.org/10.1111/1467-8268.12311>
- Weiss, F., Klein, M., & Grauenhorst, T. (2014). The effects of work experience during higher education on labour market entry : Learning by doing or an entry ticket? *Work, Employment and Society*, 28(5), 788-807. <https://doi.org/10.1177/0950017013506772>
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT press.