Urban Youth Labour Supply and Employment Policy in Côte d'Ivoire

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Abstract

This study analyses the challenges of creating employment for the urban youth in Côte d'Ivoire and the government's policies in this respect. The study is essentially about identifying the determinants of job creation for the youth and to assess government policies aimed at guaranteeing access to employment by the youth. The study used secondary and primary data. The secondary data were obtained mainly from household surveys carried out in 1993, 1995, 1998 and 2002. A study on the integration of young people into the world of work was then conducted to assess government policies on this matter. The results of this survey indicate a predominance of social capital over human capital in the process of integrating young people into employment, a state of affairs that led to unequal opportunities for the youth in the job market. Measures aimed at ensuring equal opportunities were then taken by the government. Despite the fact that these measures did not necessarily target the right beneficiaries, they produced a positive effect in terms of access to employment and improvement in working conditions. Consequently, much still needs to be done to enhance the effectiveness of these measures. What essentially needs to be done is to set strict selection criteria targeting the most disadvantaged populations.

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1. Introduction

Persistent youth unemployment is a major concern for a number of developing countries, including Côte d'Ivoire, that are seeking effective mechanisms to integrate their youth populations into the world of work. An analysis of job opportunities in urban areas in Côte d'Ivoire shows an unfavourable situation for the youth. Firstly, the employment rate for the youth is lower (40%) than that of adults (60%). Besides, the youth are employed mainly in informal and insecure activities.[1] Secondly, in terms of unemployment and inactivity,[2] the proportions for the youth are higher than those for the general population of working age: more than 80% of unemployed people are aged 15 to 34, and 29.3% of them are inactive. Finally, the higher one's level of education, the less likely one is to get a job in Côte d'Ivoire, as is the case in other African countries. In such a situation, networks of acquaintances[3] make up for the poor management of the labour market - which explains why they are so prevalent in the employment process concerning young people. The 2002 household survey reported that 52% of job applicants chose to use such networks and that 77.6% of those who had already secured employment had gone through them[4]. This mismanagement of the labour market leads to a deterioration of well-being on the part of the youth that could be a threat to political, economic and social stability of their country in the long run. Aware of such a threat, and drawing inspiration from employment policies in developed countries, Côte d'Ivoire[5], like many other African countries[6], implemented about 10 programmes to reduce unemployment and job insecurity, among which were the Employment Support Programme (PAE) and the Employment for School Dropouts Programme (PAJD).

In spite of the implementation of such measures in Côte d'Ivoire, the situation is still far from satisfactory. Moreover, the effectiveness of the various programmes cannot be objectively established since they have hardly been evaluated. The literature that has evaluated such programmes using the appropriate (experimental and non-experimental) economic methods essentially concerns developed countries, although it can be related to developing countries to some extent. There are very few studies that have sought to evaluate youth employment policies in developing countries using suitable economic methods. The reason may be that there are few African countries that have designed and implemented employment policies targeting the youth. And yet it would be very important to assess the impact[7] of such policies on the integration of the urban youth into the world of work and on the reduction of job insecurity for the youth so that such an assessment serves[8] as a basis for future policies, especially in the post-conflict situation in Côte d'Ivoire.

These observations bring out the relevance of the challenges of integrating the youth into the world of work. From these arise the question of identifying the reasons for the

difficulty in creating employment for young people in Côte d'Ivoire, and the results and limitations of policies aimed at promoting young people's access to employment. Throughout this study, the youth are defined as the population segment aged between 15 and 29 (see Kouakou, 2003).[9] In 2001, 29.3% of the Ivorian population was in this age bracket.[10]

Objectives and hypotheses

The aim of this study was to analyse the integration of the urban youth into the world of work in Côte d'Ivoire and to assess the effectiveness of the government's policies aimed at this very integration. The specific objectives were: to establish the empirical determinants of youth employment by analysing the ways in which from being unemployed through informal employment, the youth get to finally be in formal employment; to identify the empirical determinants of the challenges involved in creating job opportunities for the youth; and to evaluate the measures taken by the government to employ young people in Côte d'Ivoire.

With regard to research hypotheses, the study was based on the assumption that in general the youth strongly contribute to the increase in urban employment. In order to analyse the challenges facing the youth in relation to employment, the following specific hypotheses were tested: (1) the integration of young people into the world of work is not independent of individual, family and environmental characteristics of the youth; (2) being employed through the government programmes has a positive impact on working conditions.

2. The supply of urban labour in Côte d'Ivoire

Literature review

The persistent and high rate of unemployment among the youth is one of the distinctive features of the labour market in developing countries. On the one hand, the highest rate of unemployment is found among the youth with the highest academic qualifications, as a number of studies have shown — Montmarquette, Mourji and Garni (1997); El Aoufi and Bensaïd (2005); Boougroum, Ibourk and Trachen (2002) for the case of Morocco; Domoraud (2003); Kouadio (2005) in the case of Côte d'Ivoire; Karaa (1994) in the case of Tunisia; Njikam, Tchoffo and Mwaffo (2005) in the case of Cameroon; Brilleau, Roubaud and Torelli (2004) in the case of seven capital cities of countries in the UEMOA zone; and BIT [ILO] (1999) in a general context. According to Ly (1988), the challenges in creating employment for the youth in Africa stem from a combination of demographic, economic and structural factors. First, there are huge numbers of young people seeking employment. This situation is a result of population growth and rural exodus. Indeed, when young people leave the countryside for towns, it is difficult for them to find employment because jobs are protected due to segmentation of the labour market and because they lack reliable qualifications and professional experience. The lack of, or inadequate, investment is in many cases a significant cause of the lack of job opportunities. There are two additional reasons: the strong competition in the urban labour market and the inefficiency of the job-seeking process.

With regard to structural factors (Cahagarajah and Thomas, 1999; Lachaud, 1996), the impact of structural adjustment programmes has been mentioned as a catalyst for the unemployment of young people, in particular those with university degrees (Lachaud, 1996). Indeed, between 1980 and 1992, the modern sector of the economy lost about 60,000 jobs. Horton, Kanbur and Mazumdar (1991) also mention the competition between old job applicants and new graduates, with the latter being at a disadvantage because of their lack of professional experience. Moreover, privatization had a negative effect on youth employment as well, because before the structural adjustment programmes the public sector was the biggest employer of school leavers and university graduates. Further, all the studies on unemployment have shown that the rate of unemployment among young people is double that of adults (BIT [ILO], 1999). One explanation for this situation could be the lack of economic growth in developing countries and the rigid nature of the labour market (Muet, 1991; Boltho and Glyn, 1995). However, an analysis of the possible causes of unemployment shows that in general there is no correlation between youth unemployment and minimum wages as a factor of the rigid

nature of employment in developing countries (BIT [ILO], 1999). Besides, it has been shown that making salaries more flexible does not seem to be the solution as it has not been proved that the youth are unemployed because of low salaries. After all, salaries for young people have reduced in recent years compared with those of adults without leading to a lower unemployment rate.

Other more theoretical studies[11] have laid emphasis on the reserve wage and optimistic behaviour on the part of job seekers. However, it is not possible from these studies to grasp the underlying determinants of youth unemployment due to the job insecurity in the urban areas in developing countries. That is why a good understanding of youth unemployment requires the use of empirical and microeconomic tools. In this respect, various studies have been carried out using panel data or cross-sectional data in order to understand the underlying determinants of youth unemployment.

Because of the non-existence of panel data in developing countries, most of the studies use cross-sectional data, which makes it possible to highlight the impact of the environmental and individual characteristics of young people on their integration into the world of work. With regard to environmental characteristics, some researchers start from the assumption of the existence of a network hypothesis to explain the difficulty many young people experience in getting jobs (Fields, 1975; Tenjo, 1990; Trzcinski and Randolph, 1991; Cohen and House, 1996; Montmarquette, Mourji and Garni, 1997; Boougroum, Ibourk and Trachen, 2002; Domoraud, 2003; Brilleau, Roubaud and Torelli, 2004; El Aoufi and Bensaïd, 2005; Njikam, Tchaffo and Mwaffo, 2005). Indeed, the theory of networks is based on the key elements of having access to information and being recommended by someone. These two elements on their own depend on the family background and personal initiatives of the worker which in turn determine the social networks to which the worker belongs. The position occupied in the labour market depends on these networks. The models developed by Montgomery (1991) and Mortensen and Viswanath (1994) point out that personal contact offers better information on the personality of both the employer and the employee. Empirical studies have shown that using a network of acquaintances increases the probability of getting a job (Granovetter, 1995; Holzer, 1988). On the other hand, though, the relative impact of this network on the quality of the job acquired is controversial.

One consequence of the use of networks of acquaintances is what Tenjo (1990) called "luxury unemployment". This notion suggests that young graduates could be unemployed because their aspirations in terms of income, working conditions and job status are much higher than the realities of the existing job opportunities. These aspirations are assumed to be positively related to the social status of the family to which the job seeker belongs, hence the idea of luxury unemployment. A second aspect has to do with the individual opportunities of networks and connections associated with wealth, and which considerably increase the probability of unemployment. That is, because of family wealth the youth job seekers have high aspirations which can increase unemployment (aspiration effect), but can also reduce it by increasing the opportunities available to the same job seekers (opportunities effect). The net effect of these conflicting aspects depends on which of the two is the stronger.

While these environmental aspects will influence young people's chances of finding jobs, experts on labour economics say it is the individual characteristics of the youth

that have a greater effect on how quickly they will find jobs. Thus, the theory of human capital shows a relationship between education and employment on the one hand, and between education and social well-being on the other. However, some studies, including those undertaken by Lachaud (1996) and the ILO [BIT] (1999),[12] show a positive relationship between level of education and unemployment. In addition to unemployment, the labour markets in developing countries are characterized by underemployment. Kingdon, Sandefor and Teal (2005) have shown that African economies with a low rate of unemployment are at the same time characterized by a highly developed informal sector. These authors analysed mobility by segmenting the labour market into unemployment, employment in the formal sector as well as in the informal sector, but did not take into account the inactivity that characterizes many young people in urban areas in Africa.

A major observation transpires from the literature that analyses the urban labour market: there is a scarcity of empirical studies that specifically address the integration of young people into the world of work in developing countries, and in Africa in particular. Most of the studies on the urban labour market focused on the returns of education (Nielsen, and Westergard-Nielsen, 2001; Neitzert, 1996), on the wage differential (using the Mincer equation) between the formal and the informal sector on the one hand, and between men and women on the other, on the determinants of the reserve wage (Nielsen, and Westergard-Nielsen, 1987), and on the impact of the structural adjustment programmes on youth unemployment (Cahagarajah and Thomas, 1999). And yet poverty in Africa arises from the lack of job opportunities, hence the need for a study aimed at better understanding the world of employment in Côte d'Ivoire.

Methodology of analysing the labour supply of the urban youth in the labour market

This sub-section first describes the sources of the data used, then the models of integrating the youth into employment and, finally, the econometric results.

The data

The study used data drawn mainly from the surveys on household living standards carried out in 1998 and 2002 and, to a lesser degree, those carried out in 1993 and 1995. The study based its analysis of the determinants of the integration of the urban youth into employment on the 2002 survey, as it is the most recent. The 1998 survey collected data from 23,962 individuals from 4,200 households. The 2002 survey collected data from 57,166 individuals from 10,800 households. Out of the surveyed people, 6,551 were young people of working age or who were out of the school system at the time of the survey. The 1993 and 1995 surveys collected data from 56,953 and 5,427 people, respectively.

The statistical analysis of the data from the different surveys showed that unemployment in Côte d'Ivoire was essentially an urban phenomenon (see Appendix 1). It also showed that the unemployment rate increased with age, up to 29, then started decreasing (see Table 1 of Appendix 1). The highest rate concerned young people aged between 20 and

29. The analysis of data by area of residence showed that the two biggest towns in Côte d'Ivoire (Abidjan and Bouaké) had the highest rates of youth unemployment, suggesting that this correlates with the size of the town. It was found that Abidjan alone accounted for 79.9% of the country's urban unemployment, 44.76% of which included youth unemployment, while its weight in the country's urban population was just 55% (PNUD-INS, 2007). This observation suggests that migration, and in particular rural exodus, is one of the most significant determinants of urban youth unemployment, especially in Côte d'Ivoire. In terms of seniority in the labour market, out of the 79.9% share of the unemployment rate in Côte d'Ivoire observed in 2002 for Abidjan alone, 46.1% were first-time job seekers, while 33.8% were formerly employed. Therefore, unemployment concerns mainly first-time job seekers.

Using the data from the 2002 survey, an econometric analysis was done from two angles: first, from a single model using two occupational states (occupation versus lack of occupation); second, taking into account the heterogeneity of the youths' occupational positions in the labour market, a model based on three or four occupational states was used to analyse the urban youth's transition[13] from being unemployed to being employed.

The analysis based on a model with two occupational states

A simple situation was imagined where the young person had or did not have an occupation, and parameters were analysed which are likely to influence the young person's chances of getting a job while ignoring the nature of this job (whether formal or informal). In this case, a dummy variable was used which was assigned the value 1 if the young person declared having a job and the value 0 otherwise. Given the qualitative nature of the variables, a binary logit model was estimated.

The dependent variable was determined by relating the explanatory variables X_i to the observation of the event $\{Y_i = 1\}$ or $\{Y_i = 0\}$ with:

$$Y_i = X_i \beta + \varepsilon_i \qquad (1)$$

X_i is the vector of independent variables, β the vector of the coefficients of the variables to be estimated, and ε_i the disturbance linked to the i^{th} observation.

Given the segmentation of the labour market that goes beyond a simple representation in terms of primary and secondary market as analysed by Lachaud (1991), this binary model does not enable one to grasp the reality of the process of integrating the youth into employment in Côte d'Ivoire. It is indeed possible to subdivide employment into formal and informal employment, as it is possible to subdivide lack of occupation into unemployment and inactivity. This modifies the modelling of job opportunities which can be analysed in the form of occupational transition by assuming four occupational states: inactivity, unemployment, informal employment and formal employment. This study assumed that people necessarily go through a period during which they are inactive. This period could last for a long period or could come to an end when job opportunities become available, thus enabling the job seeker to start looking for a job in earnest by

setting himself or herself criteria for accepting or not accepting the job. In this case, the search for employment can either be satisfactory or not satisfactory. If the job seeker gets a good job (in formal employment), then he or she is satisfied. However, if he or she is not satisfied, or if it takes long for him or her to get a job, then he or she can decide to lower his or her expectations and accept a job which either does not meet his or her criteria or is in the informal sector. Such situations can be provisional or definitive. From this analysis, a model of job opportunities could be designed based on three or four occupational states.

The model of labour supply based on three occupational states

Let us assume that a young person decides to participate in the labour market if his or her desirable wages Z^*_i (reserve wage), non-observable (as a function of individual observable characteristics X_i and non-observable characteristics α_i) are lower than the market wages Z_i (current salary), observable (also as a function of observable characteristics w_i, and non-observable characteristics u_i) in accordance with the neoclassical theory of the functioning of the labour market (Lipman and McCall, 1976). It is assumed here that there is no state intervention at all in the labour market. Logically, people accept jobs if:

$$Z_i (w_i, u_i) > Z^*_i (X_i, \alpha_i) \qquad (2)$$

With reference to the market prospecting theory, an alternative income R could be envisaged which represents the instantaneous utility of the person. In this case, the following situations are possible:

$Z_i (w_i, u_i) > \max (z^*_i (X_i, \alpha_i), R)$	The person accepts a job.
$Z_i (w_i, u_i) < \max z^* (X_i, \alpha_i) > R)$	The person remains in the labour market but continues to look for a job; in this case the choice to be unemployed can be considered as resistance to the decreasing value of diplomas.
$Z_i (w_i, u_i) < Z^* (X_i, \alpha_i) < R$	The person refuses to engage in any search for a job and thus remains inactive.

Depending on the situation, the young person can go through different stages: from unemployment to employment or from unemployment to inactivity. Inactivity is a situation in which the young person compares his or her alternative income (instantaneous utility) with the reserve wages and to the current wages in the market. If he or she is in state *j* at time *t*, he or she gets a flow of instantaneous utility $U_j(t)$.[14] His or her utility will be measured by the integral of this flow of utility in time, as in the following formula:

$$U_r(t) = \int_{t_j}^{t_j + 1} U_j(t)\, dt \qquad (3)$$

By referring to the Flinn and Heckman (1982) model, a space E can be defined as follows:

E = {C, I, E} where C = unemployment, I = inactivity, E = employment

$U_C(t) = -c + R + A$ where $c > 0$; c is the instantaneous cost of the search for employment, R the alternative income (remittances from parents and other acquaintances), A the unemployment benefit.

$U_I(t) = R$; R = alternative income (remittances from parents and other acquaintances).

$U_E(t) = Z$, where Z is the instantaneous rate of wages.

Let us assume that $U_c(t)$ does not depend either on a wage offer or on the function of the distribution of wages, but that it remains constant for the entire period during which the person is unemployed. Let us further assume that the utility that results from job $U_E(t)$ is an increasing function of the wages received and not of the distribution of wages.

The transition in the labour market is made possible by the fact that in each occupational state the person gets opportunities to transition to other states. For instance, when he or she is looking for a job and incurs costs, a person can end up with either a stable job opportunity or an insecure one. In this case, the transition in the labour market can be analysed by segmenting [15] it into unemployment, formal employment and informal unemployment.

Econometric strength of the model of labour supply with more than two occupational states

Let us assume an imperfect labour market without state intervention, which functions with distortions and entry barriers. On this assumption, we can estimate the utility related to each occupational situation on the market (Najman and Pailhé, 2001). Indeed, despite the constraints related to the rationing of employment in the labour market, each situation is related to a utility. Individual and environmental characteristics of young people can lead them into situation *j*. The young person can be contented with this situation and accept the utility or the disutility resulting from it. There is disutility when the person gets into unemployment and remains in it or moves from the state of unemployment to that of inactivity after several unsuccessful attempts at searching for a job.

If young person *i* with characteristics X_i is in situation *j* where (j = 0, ...m), then the utility of this situation is the following:

$$U_{ij} = \beta' X_{ij} + \Sigma_{ij} \quad (4)$$

where X_{ij}, represents the vector of the individual and environmental characteristics of the young person in situation *j*, β represents unknown parameters and Σ_{ij}, the random term.

It is assumed here that there are entry barriers in the labour market, but that the person will only remain in situation *j* if its utility is higher than that associated with the other situations. The probability that the young person will remain in situation *j* depends not only on his or her characteristics, but also on the utility that this situation offers.

$$\text{If } U_{ij} (U_{ik} \text{ for } k \neq j \text{ then } P(U_{ij} (U_{ik}) \quad P(X\beta_j - X\beta_k \quad (\Sigma_k - \Sigma_j \quad (5)$$

In this case, the form of the transition equation depends on the assumptions made relative to the distribution of errors. If we assume that errors are distributed independently and identically according to the Weibull distribution, then the difference between the errors follows a logistical distribution[16] (McFadden, 1973) if the property of "the independence of irrelevant alternatives" is satisfied. It is recommended that a fitted multinomial logit model be used as an alternative to the multinomial logit model if the IIA test is not conclusive. It was not possible from the results obtained from econometric estimations to validate the multinomial logit model (see Appendix 3). Because of this, a multinomial probit was used.[17].

Let the alternative Y_{ij} be the dependent variable. It will take the value 1 if the choice of agent *i* is made on alternative *j*, and then all the other components noted as Y_{i-j} take the value 0. If one chooses a compact representation of the decision of agent *i* in the form of scalar D_i which takes the value j if the agent chooses the j^{th} alternative from a set of possible alternatives p that are mutually exclusive, then $D_i = j$ for $1 \leq j \leq p$.

$Y_i = (Y_{i1}, Y_{i2}, ..., Y_{ip})$ where $Y_{ij} = 1$ and $Y_{i-j} = 0$, and $Y_i = x_i\beta + \varepsilon_i$.

The probability for person *i* to have chosen alternative *j* is:

$$P(D_i = j) = P\left[\bigcap_{k \neq j} Y_{ik} \leq Y_{ij} \right] \quad (6)$$

This probability rests on the expected type of distribution followed by unknown quantities ε_i. By taking ε_{ik} i, independent between agents, and non-correlated between alternatives, and following an extreme law, we arrive, after some changes, at McFadden's (1973) multinomial logit model. The assumption of non-correlation of unknown quantities means that the independence of irrelevant alternatives should be expected. If certain

modalities used are close substitutes in relation to other modalities, this hypothesis cannot be credible. One way of making up for this deficiency is to eliminate the assumption of the independence of unknown quantities between alternatives and to assign a general structure to the matrix of covariance of unknown quantities ε_i by assuming, for instance, that $\varepsilon_i = (\varepsilon_{i1}, \varepsilon_{i2}, ..., \varepsilon_{ip})$ is normally, identically and independently distributed between observations: $\varepsilon_i \rightarrow N_p$ (0,R) or R is a matrix of covariance p x p without restricting the independence of unknown quantities between choice alternatives.

Econometric results of the models with two and four occupational states

Results of the model with two occupational states (simple logit)

There are three groups of exogenous variables: (1) population variables: sex, sex of the head of the household (sexhead), age, age squared, size of the household (Hhsize), and area of residence (Abidjan or other town); (2) socioeconomic variables: use of networks of acquaintances, number of young people in the household who are working; (3) education-related variables:[18] certificate of primary school education, certificate of general secondary school education, certificate of vocational training, and certificate of general higher education. The results obtained from econometric estimations are summarized in Table 1.

The analysis in this table shows that access to employment is negatively correlated with age. This can be explained by the inverse effect of the variation in unemployment depending on age. The positive sign of the age squared reflects the increasing marginal effects. The probability of being in employment decreases with age, until 21.39 years.[19] This finding corroborates statistical results which have shown that the highest unemployment rates were recorded between ages 20 and 29.

On the other hand, sex was found to have no effect on unemployment. Among population variables, only area of residence and size of the household had significant coefficients. The size of the household was found to reduce the logarithm of the chances of getting a job. This could be attributed to the solidarity within the household which would encourage its members to look for a good job rather than going for one that does not correspond to the profile of the young job seeker. This looks like an implicit form of luxury unemployment. Similarly, living in Abidjan was not found to be an advantage for a young person to find a job. This observation corroborates the Todaro paradox that creating new jobs in urban areas does not necessarily lead to a reduction in employment. Nevertheless, migrations to Abidjan have been on the increase despite the high rate of unemployment in the city. An analysis of the urban population in Côte d'Ivoire showed that in 2006 the city of Abidjan on its own represented 40% of the entire country's population (PNUD-INS, 2007).

Regarding education-related variables which have to do with the effect of human capital on getting out of unemployment, having achieved a higher level of education was not found to be positively correlated with the probability of getting a job. On the other hand, non-school training increased chances of getting employment. This paradoxical situation can be explained by the fact that there is a mismatch between training and job

requirements and that recruitment criteria have been made disadvantageous to first-time job seekers in particular.

Table 1: Results of the logit[1] estimation of the determinants of the urban youth unemployment in Côte d'Ivoire

Variables	Coeff	t[(2)]	dy / dx
Population variables			
Sex[3]	-0.087	-0.41	-0.0071
Sexhead[4]	0.066	0.26	0.0055
Age	-0.941	-2.57**	-0.0771*
Age squared	0.022	2.72***	0.0018***
Hhsize[5]	-0.094	-4.74***	-0.0077***
Area of residence[6]	-1.35	-2.98***	-0.0921***
Socioeconomic variables			
Personal relationships[7]	1.295	5.66***	0.1381***
Rate[8]	-10.72	-16.79***	-0.8783***
Education-related variables			
Non-school[9]	0.96	3.85***	0.0690***
Certificate of primary school education	-0.42	-1.69*	-0.3666
Certificate of general secondary school	-0.48	-1.35	-0.4578
Certificate of vocational training	-1.084	-2.75	-0.1294**
Certificate of general higher education	-1.74	-3.02	-0.2639**
Constant	14.3	3.39	

Logpseudo likelihood	=	- 305.17629
Number of obs	=	1455
LR chi2 (34)	=	290.67
Prob > chi2	=	0.0000
Pseudo R2	=	0.6115

(1) Maximum of likelihood; (2) the t is the ratio between the coeff. and the standard error of the coeff.; (3) Basis = female; (4) Basis = female; (5) size of the young person's household; (6) represents the urban area where the young person lives: this variable takes on the value 1 if the young person lives in Abidjan and 0 if he/she lives in another town of the country; (7) indicates that the young person uses personal relations to get a job; (8) number of people with jobs in the young person's household; (9) non-school training or on-the-job training
Note: * = significant at the 10% level; ** = significant at the 5% level; *** = significant at the 1%

The results also report on the impact of the socioeconomic variables on the integration of young people into the world of work. Results were reported for two such variables: personal relationships and the number of people with a job in the young person's household. In relation to the latter variable, a negative impact was observed, which could be attributed to the fact that the young person receives money from other members of the household to pay for the cost of searching for a job so as to get quality employment (this refers to luxury unemployment). As for the personal relationships variable, it has to do with the capacity to mobilize social capital. It is characterized by the use of networks of acquaintances as the preferred method of looking for a job. The results show that this variable had a positive effect, meaning that the probability of getting into employment is positively affected by social capital. This suggests that employment opportunities in Côte d'Ivoire have more to do with the job applicants' networks of acquaintances than with their competence.

These results point to the insecure nature of youth employment and the limitations of degree certificates in the job market. This situation is also an indication of the

limitations of the market mechanism in the labour market in developing countries. The strong use of networks of acquaintances is an obstacle to the effective functioning of this mechanism. These networks reinforce inequalities. To this, one has to add the lack of rigour in awarding degree certificates and the weakening of the State resulting from various political and economic crises. It is becoming increasingly important to belong to a well-connected family and thus have good networks of acquaintances rather than having a high level of education. This means that social capital has got the better of human capital[20] and that meritocracy is becoming increasingly irrelevant in the labour market. This engenders two major problems: first, employing people on the basis of such networks produces a system where people are not employed in jobs where they would be the most productive. Such a system is compounded by the segmented nature of the labour market, and is most resorted to when there is a scarcity of employment opportunities. The second problem stems from the society's tendency to "reproduce" itself, which comes with social inequalities: the elite manage to maintain their social rank, while the poor remain trapped in a state of utter misery. The society thus gets closed, which in turn becomes a hindrance to economic development.

An analysis of the labour market cannot be complete without taking into account all the young people's occupational situations in the market. This concern is catered for in the results of the multinomial analysis of the job opportunities available to the youth: the characterization of the youths' occupational situations was analysed using a multinomial probit model.

Results of the multinomial probit model

The results of the multinomial probit estimation are summarized in Table 2. The dependent variable is related to the young person's occupational situation in the labour market. Several occupational states were distinguished: inactivity (i.e. neither employment nor unemployment); unemployment; informal employment; and formal employment, with standardization[21] being carried out in relation to the state of inactivity. The independent variables were virtually the same as those used in the analysis of the determinants of the integration of young people into the world of work. All the interpretations were based on the estimation which in this case is the state of inactivity. This is the starting point for entering the labour market. Table 2 gives the results of the multinomial probit estimation of job opportunities for the urban youth in Côte d'Ivoire.

The results show that the tendency for young people not to belong to the inactive population is related to sex, since the coefficients for the sex variable are positive for the three modalities. Male young people were thus found to be more present in the labour market than their female counterparts. This would be explained by the low rate of schooling[22] for female young people, reflected especially in the formal employment sector. Indeed, the values for the multiplying variables (sex*certificate) show that it is only in the formal sector that the female young people were found to be really marginalized in the labour market. The marginal effects results also show that the female young people who held a vocational training certificate had higher chances of getting jobs than their male counterparts.

Table 2: Results of the multinomial[1] probit estimation of the determinants labour supply in Côte d'Ivoire in 2002

	Unemployment			Informal employment			Formal employment		
Variables	**Coef.**	**t(2)**	**dy/dx**	**Coef.**	**t(2))**	**dy/dx**	**Coef.**	**t(2))**	**dy/dx**
Demographiques variables									
Sex[3]	1.027	5.24***	0.04**	0.87	7.48***	0.153***	1.23	6.28***	0.091***
Sexhead[4]	-0.052	-0.33	0.001	-0.18	-1.73*	-0.058**	0.09	0.59	0.021
Age	0.576	2.75***	0.048***	0.024	0.19	-0.016	0.035	0.16	-0.004
Age squared	-0.010	-2.26	-0.001***	0.0015	0.52	0.0006	0.003	0.66	0.0004
Hhsize[5]	0.0198	1.52	0.0045***	-0.059	-6.25***	-0.016***	-0.054	-4***	-0.004**
Area of residence[6]	-0.219	-0.70	0.034**	-1.204	-8.86***	-0.29***	-0.875	-5.2***	-0.029
Socioeconomic variables									
Rate[7]	7.54	19.81***	0.64***	-0.204	-0.62	-0.368***	0.532	1.24	-0.009
Education-related variables									
No-school[8]	0.089	0.54	-0.027***	0.771	7.25***	0.188***	0.655	4.9***	0.035**
Cert. of primary education (CPE)	0.85	3.99***	0.073***	0.102	0.74	-0.053	0.705	3.24***	0.081***
Cert. of general sec. education (CGSE)	1.352	3.80***	0.151***	0.0114	0.04	-0.18	1.33	4.01***	0.213***
Cert. of vocational training (CVT)	2.136	5.21***	0.233**	-0.252	-0.55	-0.366***	2.376	6.10***	0.455***
Cert. of general higher educ. (CGHE)	2.482	3.81***	0.45***	0.434	0.67	-0.191***	1.175	1.47	0.048
Multiplying variables									
CPE * sex	-0.539	-1.82*	-0.026	-0.374	-1.85*	-0.08	-0.2	-0.71	0.0007
CGSE * sex	-10.03	-2.25**	-0.04***	-0.427	-1.18	-0.079	-0.49	-1.21	-0.027
CVT *sex	-1.176	-2.20**	-0.04***	-0.67	-1.15	-0.12	-1.46	-2.9***	-0.077***
CGHE * sex	-0.578	-0.65	-0.026	-0.73	-0.80	-0.21	0.357	0.36	0.118
_constant	-10.65	-4.47***		-0.36	-0.26		-3.80	-1.50	

Logpseudo likelihood	=	-1978.1927
Number of obs	=	2,437
Wald chi2 (34)	=	214.95
Prob > chi2	=	0.0000

(1) Maximum of likelihood; (2) the t is the ratio between the coeff. and the standard error of the coeff.; (3) Basis = female; (4) Basis = female; (5)size of the young persons household; (6) represents the urban area where the young person lives: this variable takes on the value 1 if the young person lives in Abidjan and 0 if he/she lives in another town; (7) indicates that the young person uses personal relations to get a job; (8) non-school training or on-the-job training

Note: * = significant at the 10% level; ** = significant at the 5% level; *** = significant at the 1%

It was further observed that the young people living in households headed by a male had significantly lower chances of being employed in the informal sector. It appears that it is the young people from households headed by widows and female divorcees that felt obliged to work in this sector for the survival of their families.

Unemployment and age were found to go in the same direction until the age of 29 (28.8), this being the maximum age considered in the sample used.

The family environment (size of the family) seems not to facilitate the young person's getting a job. The Hhsize variable, that is the variable indicating the size of the household, had a negative sign for the formal sector and the informal sector and a positive one for unemployment. This finding corroborates that by Njikam, Tchaffo and Mwaffo (2005).[23]

With regard to the area of residence variable, living in Abidjan was found to reduce the possibilities of getting a job, especially in the informal sector. On the other hand, this variable increases the chances of being unemployed, as suggested by the marginal effect being significantly positive. As for the number of people with a job, this variable was found to have a negative effect on informal employment and a positive one on unemployment. This means that when the number of employed people in a household is high, young people in the household prefer to remain unemployed to working in the informal sector. Since they have access to at least some money to live on, they can afford to remain for long periods in a state of unemployment (voluntary unemployment or luxury unemployment) in the hope of getting a good job later. This is related to the idea of using networks of acquaintances.

In relation to education-related variables, the negative marginal effect of the variable "non-school", which represents the impact of the on-the-job training, confirms that this type of training increases young people's chances of being employed in the informal sector and staying in unemployment for a shorter time. Overall, it was found from all the other education-related variables that the level of the certificate of education/training did not prevent young people from being unemployed but increased their chances of getting jobs in the formal sector of the economy. Conversely, the level of the certificate had a negative impact on getting a job in the informal sector.

The variable "social capital" was found to be of more value than the variable "human capital" in the Côte d'Ivoire labour market. This state of affairs worsens an already unfavourable situation for young people looking for jobs. It was in a bid to rectify this type of injustice in the labour market that the government of Côte d'Ivoire introduced policies aimed at facilitating the integration of young people into the world of work. However, these policies can only be said to be effective if their effect on beneficiaries are significantly positive and verifiable.

3. Evaluation of youth employment policies in Côte d'Ivoire

The evaluation of youth employment policies consists in measuring the impact of policies on the employability and working conditions of individual young people by taking into account the heterogeneity of the beneficiaries and non-beneficiaries of government policies of integrating young people into the world of employment. It should be pointed out that studies that have evaluated employment policies have generally concerned the OECD countries. Some of these countries, like the USA and Canada, have a long history of evaluating labour market activities, since the public authorities in those countries are under a legal obligation to generalize conclusions drawn from those studies because of differences in the development level of the countries concerned and the heterogeneity of their economic and social structures. Given the scarcity of research on developing countries, this study relies heavily on the research pertaining to developed ones.

Employment policies in Côte d'Ivoire

Aware of the insecure nature of youth employment, the government of Côte d'Ivoire put in place a package of policies aimed at curbing youth unemployment: return-to-the-land policies, public utility policies based on high-labour-intensive works (THIMO), the programme for creating jobs for rural youth (PIJR), the special programme for creating jobs for women (PSIF), the social fund for programmes to set up micro-enterprises (PCME), programmes for young farmers, the employment support programme (PAE) and the school dropouts employment programme (PAJD). This study will only focus on the last two. The PAE programme is run by the National Bureau for Vocational Training (AGEFOP), while the PAJD is run by the Bureau for Employment Studies and Promotion (AGEPE). The study of the two programmes that have been popular among the youth, has not been linear.

With regard to the PAE programme, which primarily targets first-time job seekers, three periods can be distinguished in the history of its functioning: the first period (1991–1992), called the experimental phase, consisted in creating direct work placements for young people in companies which signed an agreement with the Ivorian government in exchange for certain fiscal and financial incentives. Over this period, 1,554 young people were put on placement for practical work; 50% of them later got jobs. The second period (1995–1998), called the operational phase, was characterized by the addition of a second component in the programme in the form of training leading to a qualification. This training was of three types: additional training, refresher training and retraining

course. In all, 907 young people benefited from these different types of training; 63% of them later got jobs. Over the same period, 599 young people were put on work placement, after which 53.76% of them got jobs. The third period (1999–2003) was characterized by a total dysfunction of the programmes because of the military and political crisis which Côte d'Ivoire underwent. Only 59 young people were put on work placement, 42.73% of whom later got jobs.

The PAJD programme had two components: apprenticeship training and distance study of electricity and electronics. Over the 1995–2000 period, 5,552 young people were trained on the apprenticeship component, while 1,271 were on the second component. Financial constraints forced the government to suspend the programme in 2000.

In spite of the implementation of those programmes, the situation continued to worsen due to a rapid population growth (3.8%), a decline in economic growth[24] and difficulties in the functioning of both the education system and the labour market. Actually, unemployment grew even faster, with significant proportions from a qualitative point of view, as it was young people with higher education degree certificates[25] who were now most affected. Research carried out by the Bureau for Vocational Training (AGEFOP, 1998) concluded that there were about 200,000 youth who dropped out of school each year and who did not have a chance of finding jobs. This observation makes an economic evaluation of those programmes all the more relevant.

Review of the methods of evaluating employment policies

Employment policies have often been introduced as an attempt to curb youth unemployment. In developed countries, some studies (Bonnal, Fougere and Serandon, 1994, 1995; Saucier and Sofer, 1995) have shown that in most cases these policies fail to make a real impact in reducing youth unemployment and providing secure jobs for the youth. However, other studies have shown that these policies influence the transition (from unemployment to employment) in the labour market, to the extent that they affect the demand for and supply of employment (Florens, Kamionika and Mouchard, 1994; Bonnal, Fougere and Serandon, 1995). The effects of such policies are regularly evaluated for their effectiveness. The new methods used to assess them are based on experimental and quasi-experimental methods. The best known of the experimental evaluations is the measuring of the effectiveness of the programmes that are part of the job training programmes financed by the Department of Labour in the US. An evaluation showed that these programmes were of no use and that they instead intimidated the participants. A follow-up study carried out after 19 months brought to light the existence of statistically significant negative effects on the male young people's income and negligible effects on that of their female counterparts. Quasi-experimental evaluations produced the same results. However, in Europe similar programmes were found to have positive effects on employment even though they had no significant effect on wages. Research on the evaluation of those programmes gives great importance to the use of control groups. It is necessary to ensure that both the experimental and control groups are examined in a comparable labour market context. Commentary on the evaluation methods can be found in Heckman, Lalonde and Smith (1999).

Given that they can be applied easily, quasi-experimental models are the most prevalent in the evaluation of social policies which can be evaluated at different levels and by various methods. Irrespective of the method used, the most important issue always revolves around resolving the selection bias that is likely to affect the results. The basic model for the evaluation of social programmes relies on estimating the Rubin causal effect (Rubin, 1974). The model was extensively developed by Brodaty, Crepon and Fougère (2002)[26] and Fougère and Kamionika (2005) based on the work carried out by Heckman, Lalonde and Smith (1999). The starting point is that if one wishes to evaluate social aid programmes using observation (non-experimental) data, two populations have to be taken into account, namely the beneficiaries and the non-beneficiaries. The two groups differ in terms of distribution of individual characteristics that most likely affect participation in the programme. In practice, the independence between the latent variables of the results (Y_0, Y_1) and the modification T is a very unlikely hypothesis. A less restrictive condition would thus consist in assuming that there exists a set of observable variables X with reference to which the property of independence between latent results and the modification in treatment is verified. The existence of such a set of control variables and being able to determine these are essential in the practice of evaluation.

In order to estimate the parameter of interest in the Rubin causal model, a number of methods can be used. These include the matching method using observable characteristics, the matching method using the propensity score, the method of fitted, and the selectivity model based on non-observable variables. Initially, the method proposed by Rubin was that of matching. This method pairs each individual i who is under treatment with individual ĩ(i) who is not under treatment but whose characteristics are identical with those of individual i. If X is the vector of individual characteristics (assumed observables), this method supposes that observed for each individual being treated, an untreated individual comparable, by considering the characteristics.

The property of conditional independence generally requires taking into account a considerable number of conditioning variables. For this reason, the matching can be difficult to achieve. In addition, it can be noted that there is a persistence of individual non-observed effects even when a big number of observable characteristics have been included.

Indeed, for certain individuals under treatment, it is possible not to observe a single individual who is not under treatment but who has exactly the same characteristics. One solution would be to use the probability of participation in lieu of observable characteristics, hence the estimation by matching on the propensity score (Rosenbaum and Rubin, 1983). However, the asymptotic properties of this estimator remain unknown. No result would enable one to describe the behaviour of the estimator when the number of individuals under treatment becomes big. This raises the problem of extrapolating from the results obtained.

Another very efficient way of maintaining differences between groups is by using the method of fitted or double differences, which enables one to estimate the fixed effects called “estimators of differences”. Longitudinal data are collected for the principal measures of the results. In order to take into account the differences in the samples of participants and non-participants, a longitudinal estimator of the effect of the programme is used. This estimator takes into account the level of the variable of the results preceding

and following the programme, unlike cross-sectional estimators which use the data only for the results that follow the programme. In other words, the advantage of this model is that it makes it possible to understand the situations before and after the implementation of the programme. It is, therefore, a model that requires the use of a panel on the young people's occupational trajectory. It is an effective method which, however, depends on the richness of the conditioning variables.

The last model that was used is the Tobit model of endogenous selection used on non-observable variables; it was applied for example by Cavaco and Fougère (2002) and Cavaco (2003). The starting point for this model is the existence of dependence between non-observed elements that affect treatment and potential results. The use of the Tobit model is predicated on the fact that in estimating parameters, only one of the two state variables is observed and that it is the part of the sample related to this variable that is taken into account. This is referred to as the truncated normal law. However, estimations can be biased when the law of the terms of non-observed errors is not well specified.

Finally, given the quality of the data used in this study, it seems difficult to grasp the Rubin causal effect through the different models described. However, one possibility could be to examine the effect of the programmes on the quality of employment. This could be done using the Heckman method which consists in either using the participation in the programme as a possibility of resolving the selection bias or the Heckman two-step method (Heckman, 1979; Heckman and Robb, 1985). The study preferred to use the instrumental variables method, with the instrument being the predicted probability of participating in the youth employment programme.

Methodology of evaluating youth employment policies

The data used in this part of the study are primary data collected during a survey carried out on youth employment in the city of Abidjan in 2004. Of the 735 young people surveyed, 165 were beneficiaries of the employment support programme (PAE) and the school drop-outs employment programme (PAJD) while 570 were not beneficiaries of these two programmes. A description of the methodology used in this study is given in the Appendix.

There were two ways of analysing the data: first, the use of mean difference tests and second, an econometric analysis. This latter method was used to determine the effect of youth employment programmes on the stability of employment through an instrumental variables probit model. These instrumental variables are used to predict the treatment probability and to solve the selection bias related to the endogeneity of selection variable.

The basic model of the result or the effect of the programme is the following:

$$Y_i = X_i\beta + T_i\gamma + \varepsilon_i \tag{7}$$

$Y = 1$ *if the job held by the young person is stable and* 0 *if no*t

The equation of selection or participation in the programme is formalized as follows:

$$T_i = Z_i \theta + \upsilon_i \text{ (treatment equation)} \quad (8)$$

$T = 1$ *if the young person has participated in the programme and* 0 *if no*t

X and Z are two distinct sets of observed factors which can influence the getting of a stable job and participation in the youth employment programme, while ε and v are the terms of the random error which are assumed to be normally distributed in order to take into account non-observed factors which influence the getting of a stable job and participation in the programme. From Equation 2, the predicted value of the probit estimation was then integrated into the result equation as an instrument of the estimation of the effect of the programme.

In the first equation, six types of variables were used: population variables (sex, number of brothers and sisters in employment); variables of professional state (duration of past employment spells, number of past unemployment spells, duration of past work-placement spells); variable of interest (youth employment programme); education-related variables; size of the enterprise; and activity sector.

In the second equation, four types of variables were used: population variables (age); socioeconomic variables represented by the parents' socio-professional category; a variable occupational status (reflected in the number of spells of inactivity which the young person went through); and education-related variables which make it possible on the one hand to measure the young people's educational performance and, on the other hand, to justify their selection to take part in the youth employment programme. These education variables are: regular attendance at classes, the number of years repeated by the young person, and the number of years during which the young person benefited from a scholarship. Overall, the variables in the second equation were chosen in a way that the requirement of conditional independence would be met. In choosing them, the process of selecting youth employment programmes was taken into account. Further, in order for the attributes of the explanatory variables of the result variable to be independent of the treatment, the study used variables that were lagged in time. Moreover, the control group comprised of people with very similar characteristics.

Main results of the evaluation of youth employment policies

These results are of two kinds: results from the mean difference tests and econometric results.

The mean difference tests (see Appendix 3) show that the programmes had a positive effect on the quality of employment, access to employment and level of wages. Indeed, the proportion of active young people was 50.61%; 70.30% were from those who

benefited from the programmes and 44.91% from those who had not. With regard to unemployment, the respective proportions were 34.14%, 27.27% and 36.14%. Regarding inactivity, the respective proportions were 15.24%, 2.42% and 18.95%. These figures show that the beneficiaries of the youth employment programmes recorded a lower rate of unemployment (although still high) and, mostly, a much lower rate of inactivity than the non-beneficiaries.

In relation to wages, the average wages for the beneficiaries of the programmes who had jobs was found to be on the whole 3.17 times higher than those of the non-beneficiaries. This could mean, if there was no selection bias, that the beneficiaries of youth employment programmes who had a chance of getting a job had better terms of employment than the non-beneficiaries. It was also observed that the young people who benefited the most from the programmes were those who were put on work placement directly followed by a job; most of them were female.[27] Young people who did not get jobs directly after leaving the programmes fell back into the same conditions as those who had never participated in any youth employment programme.

As for econometric results, see Table 3.

The results in the table show that the number of spells of inactivity had a negative and significant impact on participation in youth employment programmes. This resulted from the way in which these were managed. Information about them did not flow easily, and many young people, especially those living in conditions that impeded access to information, were not even aware of the existence of the programmes in question. Not surprisingly, young people whose fathers were unemployed or invalid had a lower probability of taking part in the programmes. Conversely, those whose fathers were working, at least as workmen, had a higher possibility of participating in the programmes, most likely because they had better access to information; hence a greater capacity to build up networks.[28]

All the educational variables had a positive impact on the young people's participation in a youth employment programme. This confirms the fact that the programmes did not target a predetermined category of young people at all, and makes it difficult to assess the effectiveness of a given programme. More effective targeting would, for instance, call for minimum eligibility requirements for the programme in question. In Morocco, for example, only youth that have been unemployed for at least a year are eligible for youth employment programmes. If the most disadvantaged youth — those who in fact need government support most — do not get a chance to benefit from government measures aimed at creating employment, this would lead, among other consequences, to creating an unemployment trap,[29] and an inactivity trap, hence a poverty trap.[30]

The overall significance of the model indicates the potential endogeneity of the variable that represents the participation in youth employment programmes. In this regard, the estimated probabilities were used in evaluating the government employment measures in terms of their impact on the stability of employment, as stated in the type of work contract. There are several types of work contracts, ranging from the very insecure to the very stable ones. The former are represented by work without a contract or with a non-written contract, seasonal work, part-time employment, and temporary work. A less insecure form of employment, but still unstable, is fixed-term contract employment.

Table 3: Results of the estimation of the selection and results equations

Selection equation[1]				State equation[1]			
Variable	**Coeff**	**t[(2)]**	**dy / dx**	**Variable**	**Coeff**	**t[(2)]**	**dy / dx**
Population variables				**Population variables**			
Age corrected[(3)]	0.16	8.17***	0.03***	Sex	- 0.407	- 2**	- 0.15**
Occupational state variable				Number of brothers & sisters in employment	0.029	0.62	0.01
Numb. of inactive young pple	- 0.27	-2.02**	- 0.05**	**Occupational state variables**			
Socioeconomic variables				Duration of past employment spells	0.008	2.28**	0.003**
Father's occupational status				Duration of past unemployment spells	0.048	0.29	0.017
Informal sector self-employed (as the basis)				Duration of past work-placement spells	- 0.095	- 0.90	- 0.034
Unemployed, invalid, retired	-1.35	-2.37***	- 0.11***	**Variable of interest**			
Farmer	0.47	1.63	0.1	Youth employment programme	1.638	5.53***	0.59***
Workman	0.44	1.54	0.1	**Educational variables**			
Supervisor	0.24	0.69	0.05	***Level of education***			
Manager	0.85	2.92***	0.21***	Primary - secondary 1	basis	basis	
Formal sector self-employed	1.23	3.52***	0.37***	Secondary 2	0.255	1.12	0.092
Mother's occupational status				Secondary. vocational	0.175	0.38	0.064
Informal sector self-employed (as the basis)				Higher education. vocational	0.548	1.65*	0.207*
Unemployed or inactive	0.94	3.65***	0.14***	Higher education. general	- 0.614	- 1.51	- 0.179
Worker	1.03	2.67**	0.3**	***Certificate***	0.017	0.07	0.006
Supervisor	1.66	2.98***	0.55***	**Size of the enterprise**			
Manager	1.52	3.85***	0.49***	Very small enterprise[3]	Base		
Educational variable				Small enterprise[4]	0.046	0.20	0. 016
Number of yrs repeated	0.07	1.02	0.01	Medium enterprise[5]	0.853	3.10***	0.33***
Attendance at classes	1.06	3.25***	0.12***	Big enterprise[6]	0.88	3.52***	0.34***
Number of yrs of scholarship	0.11	3.60***	0.02***	**Activity sector**			

continued next page

Table 3 Continued

Selection equation[1]					State equation[1]			
Variable		**Coeff**	**t[(2)]**	**dy / dx**	**Variable**	**Coeff**	**t[(2)]**	**dy / dx**
Log likelihood	=	**- 230,10963**			Retailing	basis		
					Agribusiness	0.071	0.17	0.025
Number of obs	=	**733**			Technological sector[7]	0.614	2.46**	0.23**
					Teaching and research	- 0.170	0.25	- 0.058
Wald chi2 (16)	=	**225.03**			Administration[8]	0.092	- 0.42	0.033
					Other services[9]	0.146	0.26	0.052
					Constant	- 1.635	4.01***	
					Number of obs.	= 372		
					Wald chi2(19)	= 115.17		
					Log pseudolikelihood	= - 162.141		
					Prob > chi2	= 0.0000		
					Pseudo R2	= 0.3114		

(1) Maximum likelihood; (2) Student's t; the t-test is the ratio between the coefficient and the standard deviation of the coefficient; (3) age at the time of the survey – the year 2004 – the year of leaving the school system enables one to correct the effect of age and to take into account the age of the young person on leaving the educational system.

(1) Maximum likelihood; (2) Student's t; (3) less than 10 employees; (4) between 10 and 49 employees; (5) between 50 and 499 employees; (4) between 10 and 49 employees; (5) between 50 and 499 employees; (6) higher or equal to 500 employees; (7) electricity, telecommunications, water works, computers, electronics; (8) public and private administration (NGO, mutual organization, international institution); (9) banks and insurance companies, transport and logistics, agriculture, security services, etc.

Note: * = significant at the 10% level; ** = significant at the 5% level; *** = significant at the 1% level

These two types of work are referred to as atypical work. The stable form of work refers to employment of unlimited duration; it is more secure and is guaranteed over a long period of time, except in exceptional circumstances. Because of the small size of the sample, this study used only two categories of work: unlimited duration employment and unstable employment, with the latter encompassing all the other forms of unstable employment.

The model was found to be significant overall, with 78.28% of accurate predictions. Surprisingly, the variable "sex" was observed to be negatively related to stability in employment. This suggests that female young people had a higher likelihood than their male counterparts of getting stable employment. This finding, already observed in the statistical analysis, could be attributed to the strong use of networks in the labour market. Moreover, Aka and Gueye (2000) have shown that when female young people held the same educational certificate as males, they stood better chances in the labour market. Thus, it is not surprising to find that female young people were more stable in employment.

As one might expect, professional experience (duration of employment), having gone through a youth employment programme, and size of the sector, were all found to be positively related to stability in employment. But having gone through a youth employment programme was found to be the most likely factor to offer greater job security; it had the highest marginal effect. Regarding the size of the enterprise, the bigger the enterprise, the more stable the employment it is likely to offer.

In relation to the educational variables, only the variable "higher education, vocational" was found to be positively related to stability in employment, but to a small extent. This finding brings out the double advantage of education in the labour market: firstly, a high level of education is an advantage in getting a stable job in view of the filtering-down effects; secondly, having a qualification recognized by the productive system increases the likelihood of stable employment.

The last factor that was found to affect stability in employment is the technological sector. This sector comprises the sub-sectors of telecommunications, electricity and water distribution, and the enterprises dealing in computers and electronics. This sector is, however, dominated by the big enterprises, namely SODECI, the CIE, and the three telecommunications companies (CI-TELCOM, IVOIRIS and TELECEL).

4. Conclusion

The inability of the Ivorian economy to absorb graduates of the education system in Côte d'Ivoire due to the lack of consistency in the country's development model from 1980 led to job insecurity for the urban youth. This was reflected in increased youth unemployment, especially among young people with the highest educational certificates, instability and the informal nature of employment, and occupational inactivity. This state of affairs is compounded by the prevalence of the phenomenon of the use of networks of acquaintances in the labour market. The results of this study indeed show that social capital has got the better of human capital when it comes to job seeking, which deepens the marginalization and exclusion of a large segment of the population. In order to curb this job insecurity, the government of Côte d'Ivoire introduced a number of youth employment programmes in 1985. Two of these, namely the Employment Support Programme (PAE) and the School Dropouts Employment Programme (PAJD), have been the subject of detailed analysis in this study and were very popular with the youth.

The statistical analysis of youth employment programmes using the quasi-experimental method showed that only 44.91% of the youth who had not participated in the programmes (i.e. non-beneficiaries) were active, compared with 70.30% of those who had (i.e. beneficiaries); that 36.14% of the non-beneficiaries were unemployed against 27.27% of the beneficiaries; and that 18.95% of the non-beneficiaries were inactive against 2.42% of the beneficiaries. The analysis of the effectiveness of the programmes using mean difference tests and a probit model to test the stability of employment that depended on the youth having participated in a youth employment programme showed that measures implemented by the government were effective in terms of job creation. The analysis showed that the occupational situation of the young people who did not participate in youth employment programmes worsened (as reflected in a higher rate of unemployment, a very low level of employment income, and a very low rate of activity). Against such a backdrop, employment policies can be a solution to the employment crisis. But for this to happen, the available youth employment programmes need to be beefed up in terms of training content if they are to have a significant effect on the employability of the beneficiaries, and strict selection criteria must be applied so as to reach the most disadvantaged populations.

This study has shown that in all the scenarios, the role of the government remains very important in creating equal opportunities in terms of youth employment. Proof of this will come from the emergence of an active employment policy in developed countries despite their high level of economic liberalism. In order to achieve effective regulation of

the influx of young people in the labour market in developing countries, it is imperative that government programmes be better targeted, be implemented with professionalism and rigour and, more importantly, that the government understand the youths' motivations for choosing jobs. This last aspect is all the more important because guiding the youth at this stage has an impact on their transition into adulthood. The government's intervention in the process of integrating young people into the world of work must not go against their interests; instead, it must modify the matching in the labour market in their favour. In this regard, the results of this study show that the government must focus more on helping the youth to find employment. In this respect, whereas the youth employment programmes implemented by Côte d'Ivoire were effective, their impact on employability remains imprecise. This is a challenge to be taken up by future research.

Notes

1. In 2002, 52% of young people had a monthly income lower than the guaranteed minimum wage, which stood at CFA francs 36,607.

2. This refers to inactivity or any type of training that keeps the young people out of the formal system.

3. See Table 2 in Appendix 1.

4. This shows that the labour market is unfair to those who are not capable of mobilizing sufficient social capital.

5. See Kouadio (1997). The introduction of such programmes had been recommended by studies by AGEPE, AGEFOP and the ILO.

6. In Senegal, the master's degree programme was introduced as a measure to reduce unemployment. Cameroon introduced the National Employment Fund (FNE), Morocco the Employment Plan of Action (PAE), Mali and Algeria the Youth Employment Programme (PEJ). In 1991, Algeria launched a process of integrating young people into the world of work as well as a mechanism for promoting the setting up of micro-enterprises.

7. Most of the studies that have evaluated such policies in developed countries have highlighted the very high cost of such measures for modest results (Saucier and Sofer, 1995; Bonnal, Fougere and Serandon, 1994).

8. An analysis of the impact of policies for integrating the youth into the world of employment can guide decision-makers in designing policies aimed at reducing urban unemployment.

9. There is no universally agreed-upon definition of youth. This arbitrary definition takes into account the specificity of the Ivorian population (late age of leaving school, average age of those applying for jobs for the first time, and access to the first job).

10. According to the RGPH – 1998, the youth population defined as those aged 15 to 29 represented 45.1% of the population of the working age.

11. See the theory of job search (Stigler, 1962; Mortensen, 1986; and McCall, 1970).

12. The study showed that in Bolivia, Ecuador, Venezuela and Tunisia, the rate of unemployment was higher for the more educated.

13. In this study transition was analysed differently from the way it has been analysed in

transition models where it is analysed in dynamic terms by laying emphasis on getting out of unemployment into other occupational situations (inactivity and employment). This study was interested in the stages of the integration into the world of employment. Thus, its analysis is static and based on the probability of being in a given situation, while one would find oneself in another situation.

14. Florens, Komionka and Mouchard (1994) relate reviewed values to each occupational state and use expected utilities, while MacCormick (1990) thinks that the choice to remain in unemployment is a phenomenon of resistance to the drop in status which can be motivated by the fear of stigmatization if one accepts a job that does not correspond to one's level of qualification.

15. Kingdon, Sandefor and Teal (2005) think that mobility can be analysed in terms of segmentation and that the probability of remaining unemployed or being employed in the informal sector depends on the person's household income.

16. This type of model has been used by Boougroum, Ibourk and Trachen (2002). Their study used a multinomial logit model to analyse the individual determinants of typical career trajectories in order to shed light on certain selectivity mechanisms used to get access to employment. The modalities of the dependent variables are: exclusion unemployment; uncertain integration into the world of work; permanent studies; transition to access to structured employment; and, dominant employment.

17. With regard to the fitted logit, it is noted that it does not completely solve the issue of the "independence of irrelevant alternatives" assumption. This is because although it has been eliminated from the choices available at different levels on the decision tree, it still remains kept between the choices available at the same level. Moreover, in some situations this model does not allow for an explanatory variable to be used as a determinant for several alternatives, or from one stage to another (from one level of embedding to another). The use of the multinomial probit seems to be the most attractive because it simply entails choosing a law for utilities that does not allow the assumption of the "independence of irrelevant alternatives" to always be met. Thus, the issue of the IIA hypothesis is automatically avoided. It allows for all the possible correlations and substitution forms between the terms of error on the one hand, and alternatives on the other. But the multinomial probit can only be used if the number of alternatives does not exceed four (Alban, 2000).

18. I have avoided the simultaneous use of certificate and level of education to avoid problems related to autocorrelation. However, it should be pointed out that level certificate does not always play the same role as level of education: for instance, a young person may have achieved a higher level of education without having been awarded a single certificate by the educational system, and yet this level of education has most likely influenced his or her occupational situation.

19. See the table of the results of econometric estimations: 0.941/(2*0.,022) = 21.39.

20. In Morocco, research has shown the role of networks of acquaintances in the process of integrating young graduates into employment. In this research, the word "network" is defined in a traditional way as the totality of social links connecting individuals amongst them and through which private information travels (Granovetter, 1995; see also Coury, 2000).

21. Even though the category "inactive" is heterogeneous, it serves as the basis for job

opportunities. That is, it is the initial situation.

22. The low level of education for young girls leads them to early marriages. There is also the factor of the African tradition according to which the woman's responsibility is primarily to take care of children. That said, the recent past has seen a feminization of some jobs.

23. According to Njikam, Tchaffo and Mwaffo (2005), this situation is contrary to certain phenomena which one can observe in sub-Saharan Africa. Indeed, in the urban environment young people are quicker to join sectors where employment is insecure, like those of self-employment or becoming apprentices. This phenomenon is still very prevalent in big-size families: the bigger the size of the household, the heavier the duties of the household head, which compels the young men living in the household to participate in earning some income for the family.

24. The growth rate of the real GDP in Côte d'Ivoire fell from 4.8% in 1998 to 1.6% in 1999 and to -2.7% in 2000 (see PNUD-INS [UNDP-INS], 2004).

25. In Morocco, for example, the highest rates of unemployment are found among the highly educated. This led some researchers to conclude that the unemployment rate and the level of education seem to go in the same direction (Bougroum and Werquin, 1995). See also BIT [ILO] (1999).

26. The key concerns about these questions are: how can one evaluate the effect of going through an employment process, of training, of a short course on the beneficiaries' short-term future? How would the programme have led to a change in wages or the employability of a person who was not able to benefit from it?

27. The statistical results show that sex did not play the same role in the two samples. In the sample of the non-beneficiaries there is an assumption of a deteriorated situation on the part of female young people (a lower rate of activity than that of female young people: 44.7% against 59.70%); also a higher rate of unemployment (27.23% against 9.60%); and, finally, a wage income twice as low as that for their male counterparts: CFAF45,008 against CFAF80,898. However, in the sample of young people who benefited from youth employment programmes, the situation of the female young people was not found to be less favourable than that of their male counterparts. The results show that the respective rates of activity and unemployment were virtually the same: the rate of activity was 71.79% for the male and 72.13% for the female, while the unemployment rate was 28.21% for the male and 27.81% for the female. The unemployment duration was also close: 17.17 months on average for the female, and 16.15 months for the male. However, the female young people were found to have higher wages than the males: CFAF 306,199 for females against CFAF 207,759 for males.

28. After all, the unemployed and the invalid, both of whom are outside the productive system, are not able to resort to networks of acquaintances; furthermore, there is weakness on the part of the government.

29. The unemployment trap refers to disincentive or loss of motivation to look for a job again (the unemployed person is discouraged).

30. A poverty trap means that the situation of people who have been locked up in unemployment

for a long time worsens their predicament; it also refers the situation of people holding "bad jobs", that is those who most of the time remain employed in the secondary sector, with little or no possibility of moving to a primary sector which offers "good jobs".

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Appendix 1: Statistics on the labour market in Côte d'Ivoire

Table 1: Trends in urban unemployment according to area of residence and age bracket (in %)

	Year	1993	1995	1998	2002
Abidjan	***15 – 29 years***	***29.65***	***31.14***	***23.79***	***25.45***
	More than 29	11.63	7.49	9.58	13.64
	Total	**19.36**	**16.34**	**16.05**	**18.52**
Other towns	***15 – 29 years***	***11.65***	***10.38***	***7.35***	***10.06***
	More than 29	3.25	3.36	3.40	5.00
	Total	**6.61**	**6.43**	**5.07**	**7.01**
All urban areas together	***15 – 29 years***	***20.46***	***21.69***	***15.54***	***17.32***
	More than 29	7.10	5.88	6.28	8.89
	Total	**12.63**	**12.21**	**10.33**	**12.26**

Source: Author's computations from various household surveys.

Table 2: Key moves in searching for and getting a job

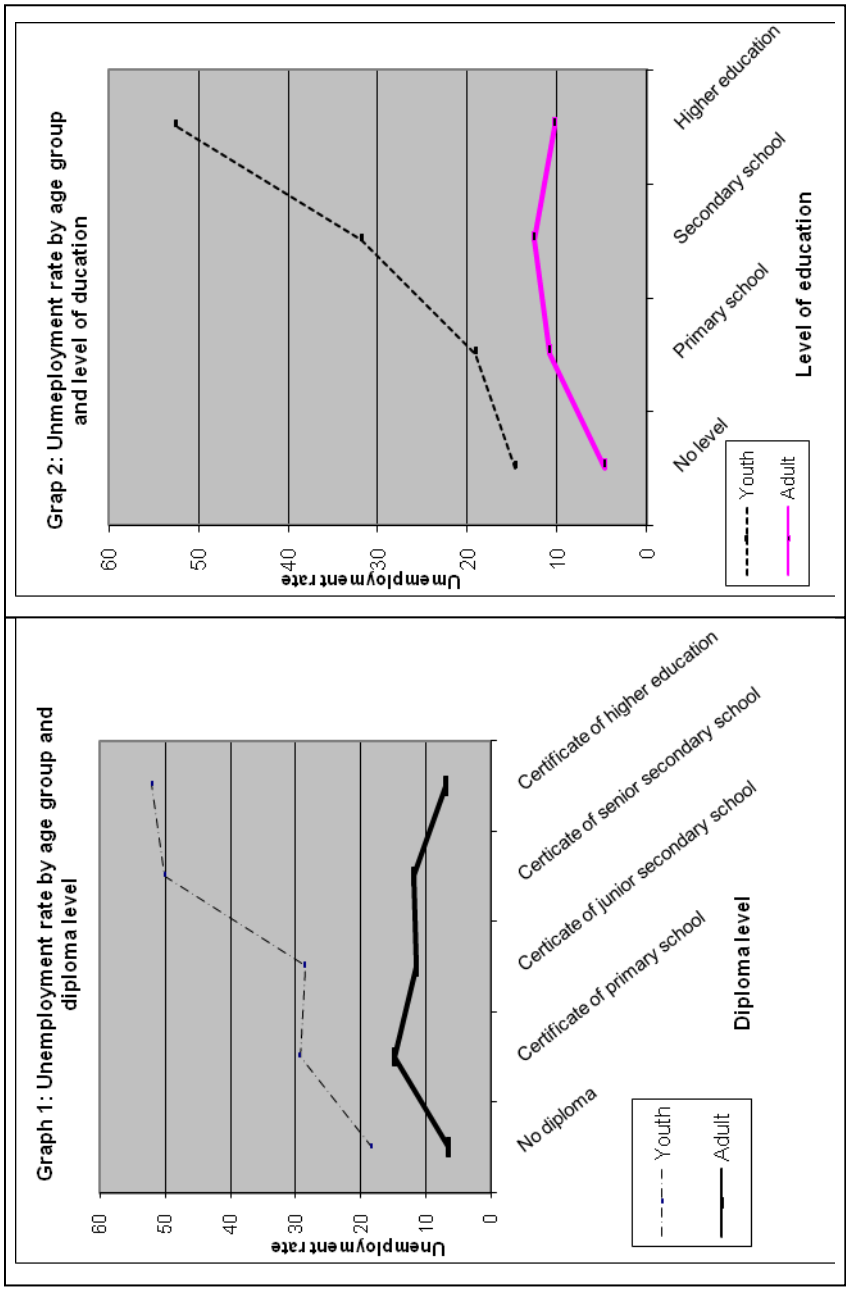
	Moves in searching for a job					Moves in getting a job				
	AGEPE	Cabinet	Contact	Network	Other	AGEPE	Cabinet	Contact	Net-work	Other
1998	2.2	3.9	12.5	69.8	11.6	0.1	0.3	10	60.6	29
2002	2.2	2.7	33.1	52.2	9.7	0.1	0.3	8.5	77.6	13.5

Source: Author's observations based on the 1998, 2002 household surveys.
Note: The figures represent intervention rates.

Table 3: Proportion of first-time job seekers in the overall percentage of unemployment by sex

		1995			1998			2002		
		Male	Female	Total	M	F	T	M	F	T
All urban areas	Formerly employed	14.6	7.7	22.2	23	19.2	42.2	28.6	14.1	42.7
	First-time job seeker	32	45.8	77.8	30.5	27.3	57.8	30.3	27	57.3
	Total	46.6	53.4	100	53.4	46.6	100	58.9	41.1	100

Source: Author's computations based on various household surveys.



Source: Author's computations based on 2002 household surveys.

Appendix 2: Results of the multinomial[1] logit estimation of the determinants of labour supply in Côte d'Ivoire in 2002

	Unemployment			Informal employment			Formal employment		
Variables	**Coef.**	**t[(2)]**	**dy/dx**	**Coef.**	**t[(2)])**	**dy/dx**	**Coef.**	**t[(2)])**	**dy/dx**
Demographiques variables									
Sex[3]	1.925	4.92***	0.02**	0.90	7.69***	0.14***	1.46	7.60***	0.07***
Sexhead[4]	-0.93	-1.42	0.001	-0.23	-1.75*	-0.06*	0.06	0.27	0.012
Age	0.85	2.86***	0.04***	-0.02	-0.14	-0.03	0.23	0.65	-0.014
Age squared	-0.016	-2.2641	-0.0001***	0.003	0.82	0.001	0.0008	0.11	0.0002
Hhsize[5]	0.037	2.02	0.004***	-0.083	-6.42***	-0.019***	-0.08	-3.83***	-0.003**
Area of residence[6]	-0.111	-0.25	0.03**	-1.46	-8.83***	-0.3***	-0.1.2	-4.95***	-0.03
Socioeconomic variables									
Rate[7]	10.41	18.53***	0.55***	-0.59	-1.24	-0.41***	0.70	1.05	0.026
Education-related variables									
No-school[8]	0.13	0.55	-0.02***	1.05	7.65***	0.21***	1.02	5.4***	0.036**
Cert. of primary education (CPE)	0.91	4.28***	0.05***	-0.05	-0.42	-0.08***	0.95	4.71***	0.08***
Cert. of general sec. education (CGSE)	1.8	3.60	0.08**	-0.27	-1.18	-0.176***	1.51	5.62***	0.18***
Cert. of vocational training (CVT)	2.34	5.75***	0.2**	-0.57	-0.37	-0.31***	2.33	6.34***	0.31***
Cert. of general higher educ. (CGHE)	3.14	5.13***	0.37***	0.04	0.07	-0.27***	2.2	3.54***	0.17**
_constant	-15.32	-4.54***		-0.33	-0.74		-7.57	-1.79*	

continued next page

Appendix 2 Continued

	Unemployment			Informal employment			Formal employment		
Variables	**Coef.**	**t(2)**	**dy/dx**	**Coef.**	**t(2))**	**dy/dx**	**Coef.**	**t(2))**	**dy/dx**

Chi2(24) = (b – B)'[(V_b – V_B)''(-1)](b – B) = 85,72

Logpseudo likelihood	=	-1995
Number of obs	=	2,437
Wald chi2 (34)	=	2147.26
Prob > chi2	=	0.0000
Pseudo R2	=	0.3499

(1) Maximum of likelihood; (2) the t is the ratio between the coeff. and the standard error of the coeff.; (3) Basis = female; (4) Basis = female; (5)size of the young person's household; (6) represents the urban area where the young person lives: this variable takes on the value 1 if the young person lives in Abidjan and 0 if he/she lives in another town of the country; (7) indicates that the young person uses personal relations to get a job; (8) non-school training or on-the-job training

Note: * = significant at the 10% level; ** = significant at the 5% level; *** = significant at the 1%

Appendix 3: Mean difference test for access to employment, young people's wages, duration of unemployment, and quality of employment

Wages for the young people in activity

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	257	72,950.5	5,986.412	95,969.48	61,161.61	84,739.38
1	116	23,5046	22,498.32	242,314.3	190,481.2	279,610.8
Combined	373	123,360.9	8,988.362	173,594.1	105,686.5	141,035.3
Diff		-162,095.5	17,528.11		-196,562.4	-127,628.6

diff = mean(0) - mean(1) t = -9.2477
Ho: diff = 0 degrees of freedom = 371
Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

Quality of employment

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	257	0.1400778	0.0216917	0.347745	0.0973609	0.1827948
1	116	0.7758621	0.0388867	0.4188225	0.698835	0.8528891
Combined	373	0.3378016	0.0245219	0.4735958	0.2895828	0.3860205
Diff		-0.6357842	0.0415249		-0.7174378	-0.5541306

diff = mean(0) - mean(1) t = -15.3109
Ho: diff = 0 degrees of freedom = 371
Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

Access to employment

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	570	0.4491228	0.0208523	0.4978417	0.4081659	0.4900797
1	165	0.7030303	0.0356797	0.458314	0.6325795	0.7734811
Combined	735	0.5061224	0.018454	0.500303	0.4698936	0.5423513
Diff		0.2539075	0.0432531		-0.3388223	-0.1689927

diff = mean(0) - mean(1) t = -5.8703
Ho: diff = 0 degrees of freedom = 733
Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

Appendix 4: Methodology for the survey on the integration of the urban youth into employment

Questionnaire

The design of the questionnaire was guided by a number of surveys on job mobility. It was mainly inspired by questionnaires and interview guides on the job seekers' career trajectories used by DARES, surveys on employment programmes in Morocco, and surveys on household living standards in Côte d'Ivoire.

The questionnaire used for this study comprised six sections numbered I to VI. Section I was about the identification and social origin of the young person surveyed. Section II sought information about the young person's parents (level of education, occupational status and size of the household). Section III sought information about the young person's education and training (level of study, certificate, type of course, conditions of study and complementary training). Section IV was the key part of the survey: it was designed to investigate the young person's job mobility in the labour market. Section V was designed to identify the young people who had gone through the youth employment programmes run by the National Bureau for Vocational Training (AGEFOP) and the Bureau for Employment Studies and Promotion (AGEPE).

Sampling methodology

This section describes the target population from which the sample was taken and the sampling design (sample size, counting and selection of sampling units).

Target population

In order to establish a causality link between state intervention and the result, the evaluation used a dummy from a control group. Indeed, the control group can only produce a satisfactory dummy if its characteristics are comparable to those of the experimental group. To have a satisfactory dummy, this study chose to focus only on urban youth aged 15 to 34, of Ivorian nationality, with at least five years of primary school education, and who finished or dropped out of school between 1995 and 1998. It, therefore, excluded young people who were still under training at school or in a youth employment programme. In relation to the definition of youth that was given at the beginning of this paper, namely that a young person is one aged between 15 and 29, the upper limit was extended to 34 years in view of the fact that a young person who was 29 years old in 1998 was 34 in 2004.

Among the beneficiaries of the youth employment programmes, a very negligible number of them were above 29 years. They were not excluded from the study because when they were participating in the programmes, they were eligible in terms of the age criterion. The eligibility criteria for the programmes were essentially linked to the notion of being young, even though there is no universally accepted definition of this. In addition, andmost significantly, the criteria focused on the school certificate required for the programme run by AGEPE, and being a school dropout for the programme run by AGEFOP. The choice of the target population in this study was motivated by the need to have two samples that were identical so as to ensure that comparison was possible in terms of the transition of the two types of young people in the labour market. Access to the programmes did not really hinge on very strict criteria such as age, duration of unemployment or level of educational certificate. The most determining factors were first being a first-time job seeker and, second, difficulty in finding employment. To be eligible for the Employment for School Dropouts Programme (PAJD), the young people were required to have completed at least five years of primary school education. To be eligible for the Employment Support Programme (PAE), they were required to have dropped out of school and to have a school certificate of whatever level. In any case, considering the time and uncertainty about being part of the programmes, only the abovementioned categories of young people could participate in them.

Sampling design

Determining the sample size is the starting point for any field survey. In this respect, the questions to be addressed are: What is the minimum number of people in the sample for this to be accepted as significant? How should the sampling units to be surveyed be counted, and how should they be selected?

Sample size

Several methods can be used to determine the size of a sample. But the choice of any one of these methods will depend on the specificity of the study, the means at the disposal of the researcher, and the time available. There are two main methods of estimating the size of the sample: the first method is technical and relies on the parent population, the standard error and the confidence interval. This is done in the following way: Let us assume that n is the size of the desired sample. Determining n then depends on the size of the parent population. When this is higher than 100,000 elements, the n is determined as follows:

$$n = \frac{t^2 P (1 - P)}{I^2}$$

- t^2 represents the choice of a confidence interval; it is equal to 1.96 in a normal distribution with a 5% risk level;
- P is the proportion that has the measured characteristic; it is usually set at 0.5, which

is the most moderate level;

- I^2 represents the standard error; this is the margin of error within which the sampling is accurate. It is assumed that there is a margin of error that causes the mean of the sample to be different from the mean of the parent population. The margin of error varies between 3% and 5%. If it has to be lower, the cost of the survey increases rapidly.

The population size is a factor only when it is lower than or equal to 100,000. In this case, a "finite population correction factor" is used. This correction factor is expressed by $(N - n) / (N - 1)$, where N is the population size. In this case, the sample size is defined as follows:

$$n = \frac{t^2 P (1 - P) N}{t^2 P(1 - P) + (N - 1) I^2}$$

The second method takes into account only the precision that needs to be attained. According to Ardilly (1994), the size of the sample increases with the desired precision. For a 10% precision, the sample size must at least be equal to 100; for a 5% precision, it has to be at least 40. Given the limited means available for this study, the second method was used. The study used a sample of 735 young people: 165 were beneficiaries of the youth employment programmes while 580 were not. The survey was conducted in all 10 communes of the city of Abidjan. After all, most of the employment policies in Côte d'Ivoire were first tested in Abidjan, as this city has the highest rate of unemployment and the biggest population density in the country.

Selecting the two types of samples was done in two different ways according to the type of young people (whether beneficiaries or non-beneficiaries of the youth employment programmes). With regard to the sample of the non-beneficiaries, selection was done in two stages in line with the sampling method used by the National Institute of Statistics (INS) during the various surveys it has carried out in Côte d'Ivoire and upon which all the studies on household living conditions, unemployment and employment have been based since 1985. In the first stage, 50 housing blocks were randomly selected from the data file of the last General Population and Housing Census (RGPH 98). It should be specified that 98 housing blocks were selected in the same manner for the household survey carried out in 2002, but the blocks that were drawn from a generated random table were all different from those selected for the 2002 household survey. In order to recover those blocks, the researcher had to contact the Directorate of Cartography in order to buy the maps of the blocks in question before carrying on with the survey proper.

In the second stage, individuals in each housing block in the sample were counted. After the counting, 12 individuals were randomly selected from each block. The choice of the 12 individuals by block was based on the fact that the study intended to reach a sample of 600 young people in the 50 blocks. The figure of 600 was in turn settled on because of limited means, as the researcher had no financial support for the survey. This figure took into account significance thresholds for the sample as defined by Ardilly (1994). Regarding the young people beneficiaries of the youth employment programmes,

several questions arose while redefining the size of the sample. Using the first method for estimating the sample size would have enabled the study to use a sample of 367 young people. This is because there was a total population of 8,368 young people who had participated in the PAE (18%) and PAJD (82%) programmes. This would have meant surveying 66 young people from the PAE programme and 301 from the PAJD. The ideal situation would have been to have a full list of the beneficiaries of both programmes and then to randomly select from the two lists. But it was impossible to get up-to-date contact information about all the beneficiaries. Nonetheless, the researcher started by making a list of all those that could be reached, from which a sample was drawn. The problems related to the non-availability of the young people to be surveyed and those related to their location forced the researcher to reduce the sample size. Eventually, only 165 were surveyed, 10 of whom were part of the survey on the youth in the city of Abidjan (first sample). Out of the 165 young people surveyed, 121 were beneficiaries of the PAJD programme, while 44 were beneficiaries of the PAE.

Counting

The counting process concerned the first sample (the non-beneficiaries). It consisted in systematically counting the young people living in the housing blocks in order to obtain information that would enable the researcher to obtain a complete list of the target population. The aim of the counting was thus to establish a complete list, without any omission or duplication of the target population of the survey. Such a list was necessary for selection of the sample to be surveyed. The counting thus consisted in registering all the young people on a form by asking them a minimum number of questions. To this end, a unique code was assigned to each young person's household, and the same code was to be written on the door of the household of the young person counted. This was done to avoid having to count the young person again and, more importantly, to be able to find him or her again later if he or she was drawn in the final sample or if complementary information was needed. It was envisaged that at the end of the counting there might not be enough young people from a given housing block to survey. Where this happened, the counting continued in the next housing block until the quota set for the block was reached. For each household visited, the necessary information was gathered from the people present and was recorded on the counting form. When a person living in a household was absent, information about him or her was collected from a neighbour or a relative who knew him or her well. The counting form was filled with a list of names of the young people who met the criteria for selection. It was envisaged that if the target population was less than 12 people, the counting would continue in the next housing block.

Selection of the sample

The multi-step method of sampling was used to select the households to be surveyed. With a total population N, from which a random sample n was required, the multi-step method would enable the researchers to select this sample in three steps. The method consists in sub-dividing the total population into n sub-groups of the same size from each

of which an individual is selected. The distance between two consecutive individuals is constant and is called a step. Thus, once the first individual is determined randomly, the others will be automatically determined.

Appendix 5: Presentation of the variables of the different models

Unemployment and job opportunities

Variable	Obs	Mean	Std. Dev.	Min	Max
Unemployment; this takes the value 1 if the young person is unemployed and 0 if not	2,513	0.1512137	0.3583283	0	1
The young person's activity	2,437	1.170291	1.061014	0	3
Inactive: 1 if yes; 0 if not	2,513	0.3768404	0.4846908	0	1
Unemployed: 1 if yes; 0 if not	2,513	0.1512137	0.3583283	0	1
Working in the informal sector: 1 if yes; 0 if not	2,513	0.3414246	0.4742819	0	1
Working in the formal sector: 1 if yes; 0 if not	2,513	0.1002786	0.3004308	0	1
Sex: 1= male; 0 = female	2,513	0.4870673	0.4999322	0	1
Sexhead: 1= male; 0 = female	2,513	0.7879029	0.4088746	0	1
Age: the young person's age	2,513	23.03502	4.014252	15	29
Age squared: the young person's age squared	2,513	546.7199	179.9151	225	841
Hhsize: household size	2,513	7.049741	5.081845	1	31
Area of residence: 1 = Abidjan; 0 = other towns	2,513	0.804616	0.3965749	0	1
Personal relationship: 1 if yes; 0 if not	1,458	0.7325103	0.4428018	0	1
Number of employed people in the household	2,513	0.1144364	0.2034845	0	1
Nonschool: 1= on-the-job training; 0 if other type	2,513	0.2351771	0.4241939	0	1
With no educational certificate: 1 if yes; 0 if no	2,513	0.5813768	0.4934316	0	1
Primary school certificate: 1 if yes; 0 if no	2,513	0.2682053	0.4431133	0	1
Sec. school certificate, general: 1 if yes; 0 if no	2,513	0.0811779	0.2731624	0	1
Sec. school certificate, vocational: 1 if yes; 0 if no	2,513	0.0477517	0.2132828	0	1
Higher education certificate: 1 if yes; 0 if no	2,513	0.0163152	0.1267098	0	1

Stability in employment

Variable	Obs	Mean	Std. Dev.	Min	Max
Stable employment: 1 if yes; 0 if no	373	0.3378016	0.4735958	0	1
Sex: 1 = male; 0 = female	373	0.766756	0.4234643	0	1
Number of brothers and sisters in employment	373	1.619303	2.24563	0	16
Duration of past work-placement spells	373	13.77748	18.45807	0	96
Duration of past employment spells	373	47.32708	26.51111	0	120
Duration of past unemployment spells	373	8.335121	17.3626	0	96
Youth employment programme: 1 if yes; 0 if no	373	0.310992	0.4635213	0	1
Primary and 1st cycle of secondary school: 1 if yes; 0 if no	373	0.5603217	0.4970146	0	1
2nd secondary cycle: 1 if yes; 0 if no	373	0.2600536	0.4392528	0	1
Secondary education, vocational: 1 if yes; 0 if no	373	0.0214477	0.145066	0	1
Higher education, vocational: 1 if yes; 0 if no	373	0.1179625	0.3229969	0	1
Higher education, general: 1 if yes; 0 if no	373	0.0402145	0.1967258	0	1
Educational certificate: 1 if yes; 0 if no	373	0.8203753	0.3843901	0	1
Very small enterprise: 1 if yes; 0 if not	373	0.5898123	0.4925283	0	1
Small enterprise: 1 if yes; 0 if not	373	0.1715818	0.3775229	0	1
Medium enterprise: 1 if yes; 0 if not	373	0.1126005	0.3165285	0	1
Big enterprise: 1 if yes; 0 if not	373	0.1260054	0.3323011	0	1
Retailing business: 1 if yes; 0 if not	373	0.2010724	0.4013404	0	1
Agribusiness: 1 if yes; 0 if not	373	0.0455764	0.2088448	0	1
Technological sector: 1 if yes; 0 if not	373	0.3002681	0.4589902	0	1
Teaching and research: 1 if yes; 0 if not	373	0.0509383	0.2201672	0	1
Administration: 1 if yes; 0 if not	373	0.075067	0.2638534	0	1
Other services: 1 if yes; 0 if not	373	0.3270777	0.4697761	0	1

Participation in a youth employment programme

Variable	Obs	Mean	Std. Dev.	Min	Max
Youth employment programme: 1 if yes; 0 if no	735	0.2244898	0.41753	0	1
Age corrected: young person's age at end of studies	735	18.61905	4.381241	9	35
Number of years of inactivity	734	0.5490463	0.6330316	0	3
Father's socio-professional category					
Unemployed, invalid, retired: 1 if yes; 0 if not	735	0.044898	0.207221	0	1
Farmer: 1 if yes; 0 if not	735	0.2231293	0.4166278	0	1
Workman: 1 if yes; 0 if not	735	0.3142857	0.4645469	0	1
Supervisor: 1 if yes; 0 if not	735	0.0829932	0.2760598	0	1
Manager: 1 if yes; 0 if not	735	0.1823129	0.3863651	0	1
Self-employed in formal sector: 1 if yes; 0 if not	735	0.0408163	0.1979992	0	1
Self-employed in informal sector: 1 if yes; 0 if not	735	0.1115646	0.3150444	0	1
Mother's socio-professional category					
Unemployed or inactive: 1 if yes; 0 if not	735	0.0163265	0.1268143	0	1
Housewife: 1 if yes; 0 if not	735	0.6911565	0.4623311	0	1
Worker: 1 if yes; 0 if not	735	0.0489796	0.2159723	0	1
Supervisor: 1 if yes; 0 if not	735	0.0217687	0.1460269	0	1
Manager: 1 if yes; 0 if not	735	0.029932	0.1705157	0	1
Self-employed in formal sector: 1 if yes; 0 if not	735	0.0068027	0.0822536	0	1
Self-employed in informal sector: 1 if yes; 0 if not	735	0.185034	0.3885896	0	1
Number of repeated years at school	734	1.749319	0.9516803	0	7
Attendance at classes	735	0.877551	0.3280269	0	1
Number of years of scholarship	735	1.14966	2.179149	0	13
Young person's occupational status	735	1.646259	0.7308194	1	3
Employed: 1 if yes; 0 if not	735	0.5061224	0.500303	0	1
Unemployed: 1 if yes; 0 if not	735	0.3414966	0.4745346	0	1
Inactive: 1 if yes; 0 if not	735	0.152381	0.3596345	0	1
Duration of past unemployment spells	735	17.79864	25.72513	0	107
Duration of past employment spells	735	29.62449	29.57654	0	120
Duration of past inactivity spells	735	19.6449	26.90543	0	108
Duration of past work-placement spells	735	12.7619	18.40379	0	104
Number of work-placement spells	735	0.6176871	0.7172173	0	4
Number of employment spells	735	1.028571	1.00435	0	5
Number of unemployment spells	735	0.5673469	0.6586423	0	4

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