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Training and Employment Mismatch in Benin: A Paradigm Shift?

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Abstract

The aim of this article is to analyze the mismatch between training and employment in Benin. To achieve this objective, a methodology based on logistic regressions using data from the Transition to Labor Force is used. The results show that in Benin, technical training graduates are 0.648 times less likely to be employed than those with general training. However, those with technical training were 7358 times more likely to obtain a job that matched their basic education than graduates with general education. Thus, to match training and employment, a paradigm shift is necessary. It is necessary to orient learners to technical trade from primary schools and strengthen mechanisms for transition to employment. This paradigm shift must take place by establishing a mechanism of trust between the education system and other components of society, including the state and private sector.

Keywords

Matching, Field of Study, Labor Market, Benin

1. Introduction

Young people face difficulties in entering the labor market and obtaining employment after leaving the education system in developing countries (Cahuc et al., 2013). Among these difficulties, we note the acquisition of a first professional experience, the sometimes recurrent passage through unemployment, and the development of unstable trajectories that characterize access to employment for most young people, especially the least qualified (Lefresne, 2003). Economic literature points to several reasons that may explain this situation in young people, described as a mismatch between employment and training.

This mismatch may stem from individuals having a higher level of education

than that required in their specific job (Ordine & Rose, 2015) or they have a job that is not in line with basic training. Under these conditions, they are forced to work in a profession for which they are unqualified. In addition, some young people are confronted with skill problems in their search for employment, which is an obstacle to employment. Indeed, they have knowledge but not the skills necessary to do the job. Therefore, youth access to the labor market is limited by employment and skill mismatches (Dibeh et al., 2019).

According to the theory of human capital (Becker, 1964), education and training play key roles in determining employment opportunities. The existing literature is divided between supporters and opponents of the theory of human capital (McGuinness, 2006). Proponents of the human capital theory argue that high youth unemployment relative to other age groups is due to insufficient human capital formation in terms of job-specific skills. They postulate that human capital is broken down in terms of formal education and practical skills. In addition, they consider education an investment that increases an individual's productivity and, consequently, future earnings (Dibeh et al., 2019). In turn, the most educated have access to higher professional positions and incomes. According to Sorokin (1959) and Parsons (1974), educational attainment is the primary factor that determines an individual's socioeconomic status in the occupational hierarchy. Education would therefore increase the chances of obtaining employment, particularly by improving the level of education that gives job seekers the skills to seize opportunities.

However, opponents of this view argue that the widespread occurrence of persistent "overeducation" among young people casts doubt on the plausibility of human capital theory. By analyzing the relationship between education and employment from another perspective, Arrow (1973) understands education as a signal. They argue that employers are not aware of the real skills and abilities of job seekers; the only information available and used by employers is their level of education. In a somewhat similar logic, Thurow (1975) postulates that the labor market is a training market that allows jobseekers to acquire new knowledge through the different positions they hold. If a jobseeker's level of education is high, the cost associated with their training is lower, and vice versa. Thus, employers prefer to hire jobseekers who require low adaptation costs.

In Benin, until the 1980s, the automatic recruitment system set up by public administration allowed new graduates to obtain jobs. Thus, a state of equilibrium prevailed between the quantity of trained labor and the quantity of jobs available (quantitative adequacy). In the following years, another recruitment method emerged: The positions to be filled are determined each year by joint decrees of the ministers in charge of the civil service and finance, with regard to the jobs provided for in the organic frameworks and authorized by the Finance Act (Law 2015-18 on the general status of the civil service). However, it is clear that this method of recruitment allows only a small portion of graduates to be recruited in the civil service, leaving the majority stranded. The public sector (public and semi-

public companies) contributes little to job creation. The main actors in the supply of jobs at the national level are private sector and private initiatives; 94.3% of private sector actors and 77.2% of private initiatives are sources of employment in Benin (INSAE & AFRISTAT, 2019).

Various measures, such as free primary education and the school feeding program, are being deployed to develop education. As a result, public spending on education increased on an upward trend from 1998 to 2019, rising from 2.75% to 2.97% of GDP (WDI, 2021). Similarly, the gross enrolment rate from primary to tertiary education increased from 40.96% in 1999 to 65.20% in 2020 (UNESCO, 2022). However, the employment rate does not evolve in line with the promises of human capital theory. It rose from 71.39% in 1991 to 68.2% in 2019 for those over 15 years of age (WDI, 2021). Additionally, over the same period, the proportion of employment in services increased from 28.98% to 43.42% (WDI, 2022), an increase of 14.44 points.

Higher education has long been characterized by a ratio of 80% of learners in general training, compared to 20% in technical and vocational training. To change this paradigm, Benin envisages a proportion of 70% for Technical and Vocational Education and Training (TVET) and 30% for general training by 2030 (SNEFTP, 2020). Indeed, the sharp increase in demand for higher education and the slow progress of the economic fabric limit the ability of new graduates to integrate into the labor market (PDDSE, 2006). Moreover, studies tend to show that even if the specialty of training remains less decisive than the level of qualification, it has a significant effect on obtaining a job or salary (Charnoz, 2011). Theoretical training is provided to learners in high schools and colleges in Benin, which is not in line with the real needs of the job market (Migan, 2015).

The decline in the employment rate, despite investment in education and improvement in the gross enrolment rate, could be justified by a possible mismatch between training and job offers. The objective of this study is to analyze the mismatch between training and employment in Benin. Motivation results from the fact that most studies that deal with the mismatch between training and employment are concerned with the vertical one (level of education too high or too low in relation to that required for the position held). This article addresses the horizontal mismatch that makes it possible to analyze the correspondence from the graduate's field of training to the position by identifying the field of training that most guarantees it. To this end, the profile and score of a young person who is likely to obtain a job are determined in Benin. The remainder of this paper is subdivided into three sections. The first section presents a literature review, the second section outlines the methodology and data source of the study, and the third section presents and discusses the results.

2. Literature Review

The literature review is based on two (02) points. They deal with theoretical and empirical reviews, respectively.

2.1. Theoretical Review

The mismatch of training for employment is largely dealt with by several theories that have provided various but complementary explanations of the relationship between training and employment. These are the human capital theory (Becker, 1964), signal theory (Arrow, 1973) and labor market segmentation theory (Doeringer & Piore, 1971).

The theory of human capital (Becker, 1964) considers training an investment that allows individuals to improve their productivity and, consequently, their future income. Thus, a productive and better-paid worker has a high level of education as a result of an investment. The profitability of an investment depends strongly on the adequacy between the training and job obtained. In a different logic from that of Becker (1975) and Thurow (1975), based on the model of competition for employment, they postulate that workers are not productive; rather, it is the job they hold that is. In other words, the worker must adapt to the job they hold through the training they receive in the firm. For Thurow, the more educated the individual, the less costly internal training will be for the company. The minimization of the cost of adaptation pushes the employer to opt for jobseekers with a high level of education for qualified jobs requiring significant internal training.

Arrow (1973) signal theory indicates that employers are not aware of the productive potential of workers through market imperfections. Therefore, they rely only on available information, which is their level of education. However, the qualification level is not sufficiently representative of an individual's skills. The latter could indeed have other credit skills that were not certified by a diploma, but which could make him suitable (adequate) for the position. Starting from the same hypothesis as Arrow (1973), Stigler's (1961) job search theory assumes that an unemployed person declines any job if he does not offer him a salary at least equivalent to his reserve salary, in the hope of finding a more interesting job. Thus, the more time he spends being unemployed, he is tempted to review his criteria. He, therefore, ultimately accepts a job that does not necessarily correspond to his profile, causing a situation of inadequacy.

The theory of labor market segmentation (Doeringer & Piore, 1971) highlights another specificity of the labor market. For her, different ways of determining wages and employment distinguish market segments, between which the mobility of workers is reduced. In the minimal form of segmentation, dualism coexists with a primary segment, in which wages are high and job security is very high, and a secondary segment with the opposite characteristics. These sectors are relatively impermeable, with some workers confined to the secondary sector, without managing to obtain a job in the primary sector: these attractive jobs are in fact rationed. The empirical testing of these theories has yielded mixed results for both job ownership and the mismatch between training and employment.

2.2. Empirical Review

The economic literature on the link between the education system and the labor

market points out, among other things, the various factors underlying job ownership and the mismatch between training and employment. In addition to the qualification, it provides for jobseekers, the education system must be designed in such a way that it can meet the labor needs of the economy. The education system must then be in perpetual readaptation to the needs expressed by the productive apparatus, with the aim of ensuring that training and employment match (Gravot, 1993). A synthesis of the work on the determinants of job ownership, and then on those of the mismatch between training and employment.

2.2.1. The Determinants of Job Ownership

The probability of finding a job is related to the sociodemographic characteristics of the individual and the household to which they belong. Empirical studies have established that the factors that explain obtaining employment are gender, level of education, marital status, and age (Fakih, 2020; Okicic et al., 2020; Dibeh et al., 2019).

Education is a determining factor for an individual's likelihood of accessing employment. Okicic et al. (2020) showed that it is easier for a person who has completed higher education to get a job. Oancea et al. (2016) obtained the same result and argued that an improvement in the level of education is correlated with a decrease in the chances of being unemployed. Manacorda et al. (2017) emphasize that education is a fundamental determinant of the transition from school to employment. They believe that when education systems are flawed, youth unemployment is high. According to Pastore (2018), education has a greater impact on the transition to the job market in Anglo-Saxon countries with dual educational systems (general education and specific training). By comparison, he notes that young people in these countries fare, on average, better than their counterparts in Eastern and Southern Europe, where the two types of training are not combined.

The educational level associated with gender and age influences the probability of job ownership. In South Korea, the duration of unemployment varies considerably according to gender and educational level (Lim and Lee, 2019). Men are more likely to be employed in the Middle East and North Africa than women. Indeed, in this area, men act as breadwinners while women assume most of their domestic responsibilities (Assaad et al., 2017). The highest unemployment rates were observed among women and in urban areas. By associating gender and education, Fakih (2020) showed that being a man and graduate increases the probability of being unemployed in the same area. In Ethiopia, young women exit unemployment much more slowly than men do, and the exit rate increases with age (Berhe, 2021). Msigwa and Bwana (2014) showed that men are less likely to be unemployed than are women in Tanzania. In Uganda, the duration of the unemployment period is longer among young people and decreases with the level of education (Berhe et al., 2021).

Beyond the socio-demographic characteristics of the jobseeker, the factors underlying the employer's recruitment decision play an important role in job ownership. Under similar employment conditions, employers prefer workers of very

working age and older workers to younger workers (O'Reilly et al., 2019). According to these authors, young people are less productive and relatively more expensive than older workers in terms of wages. Consequently, employers may be more predisposed to hire younger workers in low-paying, low-skilled, and precarious jobs, where there is less competition from higher-paid older workers. In Lebanon, Dibeh et al. (2019) found that the profile of the young person most likely to get a job is described as follows: age, being a man, being single, having received vocational training and financial support from parents, living with parents, and having current education.

Apart from the characteristics specific to the individual, those of the household to which he or she belongs can influence their chances of obtaining a job. Household income and regular contributions to the household budget have an impact on the probability of obtaining employment for household members. This follows Harris et al. (1996), who found that financial commitments have a positive impact on the employment prospects of young people. Similarly, Ahmad and Hassan (2015) find that household responsibilities increase the economic participation of young people. Household characteristics can be viewed as antecedents of youth employment probability. Kaplan (2009) believes that labor market factors play an important role in determining the dynamics of the living conditions of parents and young people in the United States. This also indicates that co-residence can be an important means of insuring oneself against labor market shocks within the family. Beyond all these factors that may explain job ownership, Uzair-ul-Hassan and Noreen (2013) point out that the mismatch in training between the skills that graduates possess and the demands of the market creates obstacles for organizations, as well as for job seekers. Thus, it is necessary to know the determinants of the mismatch between training and employment to promote faster integration of graduates.

2.2.2. The Determinants of the Mismatch between Training and Employment

A discrepancy between the level of education and/or field of study of workers and the qualifications and/or skills required for potential jobs is a source of the mismatch (Kiker et al., 1997). Diploma is certainly a major asset for the integration of young people, but competition has increased, and the conditions of integration are very contrasting according to the level, course, and specialty of training (Calmand & Hallier, 2008). Thus, the mismatch is perceived from the perspective of both the level of education (vertical) and that of the field of training (horizontal).

The inadequacy of training for employment may result from employees' level of education. Chama-Chiliba et al. (2022) showed that young employees with lower levels of education (primary and lower) in Zambia are less likely to be poorly suited to employment. The work of Dibeh et al. (2019) shows that perceptions of skill mismatch are mainly due to being male, single, having postsecondary education, and belonging to the upper and middle social classes. Similar results were obtained by Vivatsurakit and Vechbanyongratana (2021), who indicated that in

Thailand, young educated workers are increasingly absorbed in low-skilled informal work in private companies and face significant wage penalties for over-education. Specifically, for Caroleo and Pastore (2018), the mismatch between employment and training relates to the quality of education. The origin of the mismatch could therefore be the low demand for workers with a high level of education compared to the skills training provided by the education system (Cainarca & Sgobbi, 2009). However, there is a potential demand for skills in the production system that remain untapped because of the experience gap and mismatch of young people (Pastore, 2015). On the other hand, Caroleo and Pastore (2018) point out that in Italy, the mismatch is due to a lack of demand for human capital due to strong traditional manufacturing industrialization in the face of a dramatic increase in the percentage of graduates. On the supply side, the mismatch results from the inefficiency of the higher education and training system, particularly in improving graduates' job-related skills (Cipollone & Cutillo, 2013). Despite the increasing level of general education among young people, work-related skills and competencies remain insufficient (Leuven & Oosterbeek, 2011).

The high unemployment rate among tertiary graduates in Egypt is a result of the potential mismatch between training opportunities and labor market needs (Assaad and Krafft, 2015; Mryyan, 2014). For these authors, the problems of mismatch are due to a labor market that does not send the appropriate signals to those who invest in education or an education system that does not respond adequately to labor market signals. The problem may also lie in the fact that students and their families do not require skills and seek simple degrees in response to strong signals from the public sector, which they strongly favor. On the other hand, Eliamani et al. (2014) noted that only education-related work experience seems to be advantageous in finding a corresponding job. However, Bruyère and Lemistre (2006) showed that it is not necessary to be trained in the appropriate specialty to practice a profession. Nevertheless, apprenticeship can prepare better than the school-based vocational route for the professions targeted by the diploma, providing a comparative advantage in this segment of the labor market (Couppié & Gasquet, 2018).

Skill mismatches in youth labor markets have become a persistent and growing trend (Bandara, 2019). Underlying this mismatch is a lack of adequate preparation for the transition from school to work. The internship and preparation for the transition can explain job mismatch. In Germany, Saniter and Siedler (2014) found that internships have a positive and significant impact on wage returns. Similarly, Le Saout and Coudin (2015) and Al Samman and Fakhro (2017) pointed out that internships allowed students to find work more quickly in France and Bahrain, respectively. Indeed, internships improve students' choice of specialization and accelerate integration into the job market. When students complete multiple internships in different fields, they are likely to refine their final major choices. In addition, employers value internship experience but less than work experience (Nunley et al., 2016). They are more likely to perceive internships as a

signal of ability than gain experience and human capital.

Work experience during training promotes social capital of individuals (Murillo et al., 2017). Di Paolo and Matano (2016) found that pre-graduation work experience in the field of study for students in the Spanish region of Catalonia improves job quality. The probability of having a permanent job is positively affected by work during studies, especially in the case of full-time jobs related to degree. For example, students who work in jobs that match their field of study tend to have better labor market outcomes (Geel & Backes-Gellner, 2012; Weiss et al., 2014). In particular, graduates with a degree that has specific human capital, such as health sciences, exact sciences, and engineering degrees, are more likely to be well-suited to their current jobs (Salas-Velasco, 2023). The combination of work and learning can be beneficial, especially if the work is conducted in the same field of study (Carnevale et al., 2015). However, not all studies find a positive relationship between internships, temporary work, and employment outcomes. Using German data, Cerulli-Harms (2017) finds that internships have negative transitory effects, which disappear within five years of entering the labor market. Similarly, Klein and Weiss (2011) find no evidence that mandatory internships in Germany have a positive impact on wages, complexity of work history, or length of time to first job. These authors find that internships have not mitigated the disadvantages of labor market integration of graduates from low-educated backgrounds.

The match between training and employment is affected by the level of education, compatibility between young people's skills, market needs, and work experience. Younger employees with lower levels of education, market-relevant skills, and work experience are more likely to fit jobs.

3. Methodology and Data Source

The methodology adopted in this article is based on descriptive analysis and econometric analysis.

3.1. Descriptive Analysis

The analysis of the data begins with a descriptive analysis that makes it possible to structure and represent the information contained in the data to determine the characteristics of the population studied in relation to whether or not they have a job and the adequacy of training for employment. This includes univariate and bivariate analyses.

3.2. Estimation Method

Studies on the mismatch between training and employment focus primarily on job ownership (Dibeh et al., 2019). In addition, the adequacy of training and employment in this study focused specifically on young people. Thus, to conduct the analysis, three (03) logistic models are estimated due to the qualitative and binomial nature of the variables explained, "job ownership" and "training-employment match".

The first estimate makes it possible to identify the training modality that offers the best chance to obtain a job. This modality was compared to the distribution of individuals according to their type of training (descriptive analysis). If there is compatibility, we conclude that there is a match between the training offers and job offers. Otherwise, a mismatch exists.

In addition, this first estimate made it possible to build a profile of the person most likely to be employed. It is determined by considering, for each variable, the modality that offers the highest chances of owning a job. All these modalities constitute the typical profile of the person most likely to obtain a job. Then, we calculate the score (the chances) for a person with this profile to obtain a job. To do this, the variables must first be recoded so that for each of them, the modalities appearing in the profile of the person most likely to obtain a job are recoded as "1" and all the other modalities as "0" are referenced. A second logistical estimate was then made to calculate the score. In other words, it is the probability that an individual with an established profile actually owns a job $P(Y=1)$. The formula for calculating the score is based on the logistic distribution function with regard to the nature of the estimate.

Let *F*, the distribution function of the logistic distribution. It looks like this:

$$F(Y=y)=\frac{e^{y}}{1+e^{y}} \tag{1}$$

$$Moreover, F(Y=y) = F\left(cste + \sum_{i=1}^{k}\hat{\beta}_i * x_i\right) \tag{2}$$

$$Thus,\ we\ have:\ F(Y=y) = \frac{e^{cste+\sum_{i=1}^{k}\hat{\beta}_i * x_i}}{1+e^{cste+\sum_{i=1}^{k}\hat{\beta}_i * x_i}} \tag{3}$$

where *cste* = constant, $\hat{\beta}_i$ = estimated coefficients, x_i and the realizations of the explanatory variables such as x_i = 0 for the modality in reference, and 1 otherwise.

$$But, P(Y=1)=F(1)=F(profile) \tag{4}$$

Consequently, the formula for calculating the score is given by:

$$Score = F(profile) = \frac{e^{cste+\sum_{i=1}^{k}\hat{\beta}_i * x_i}}{1+e^{cste+\sum_{i=1}^{k}\hat{\beta}_i * x_i}} \tag{5}$$

Such as, x_i = 1 (1 being the code of the profile's modalities) and $\hat{\beta}_i$, the associated coefficients.

A third logistical estimate was carried out to address the adequacy of training and employment. This makes it possible to determine the type of training that guarantees a match between the employee's training and the skills required for the position held.

3.3. Data Source

The data used were from the Survey on the Transition to Working Life (ETVA) conducted in 2014 by the former National Institute of Statistics and Economic

Analysis. This sample came from the enumeration area sampling frame of the fourth General Population and Housing Census (RGPH-4). Out of a total of 4800 young people aged 15 - 29, 4305 young people were surveyed. The database was composed of 2692 young people.

4. Presentation and Discussion of Results

4.1. Descriptive Statistics

Table 1 presents the descriptive statistics of the variables used and the chi2 test to identify the independent relationship between job ownership and the explanatory variables. The first column presents the descriptive statistics of the variables used in the analysis. The relative frequencies resulting from the cross-tatrination between the explanatory variables and the explained variable are detailed in Column 2. Column 3 highlights the Khi² test results.

Table 1. Descriptive statistics—job ownership.

Variables	Modalities	Total (1)	Job Ownership (2)		Khi² (3)
			No	Yes	
Age	15 to 19 years old	44.81	55.53	28.81	383.68***
	20 to 24 years old	28.62	27.81	29.84	
	25 to 29 years old	26.57	16.66	41.35	
Relationship with the Head of Household	No link	2.57	2.00	3.41	313.27***
	Chief/Spouse	30.70	20.62	45.74	
	Son/daughter	51.89	60.27	39.40	
	Brother/Sister/Father/Mother	2.96	3.43	2.25	
	Other link	11.88	13.68	9.20	
Marital status	Bachelor	63.95	76.19	45.68	403.71***
	Fiancé (e)/Groom (e)	33.27	21.44	50.91	
	Separated/Divorced/Widowed	2.79	2.37	3.41	
Father's level of education	No schooling	61.63	52.55	75.15	241.18***
	Primary	16.48	18.27	13.82	
	Secondary	18.66	24.85	9.44	
	Upper	3.23	4.33	1.58	
Mother's education level	No schooling	83.00	78.18	90.19	106.68***
	Primary	11.30	13.94	7.37	
	Secondary	5.14	7.19	2.07	
	Upper	0.56	0.69	0.37	
Work while continuing studies	Not	83.52	91.57	64.96	294.90***
	Yes	16.48	8.43	35.04	

Continued

Youth's level of education	Primary	24.55	15.75	44.84	263.49***
	Secondary	69.09	77.50	49.70	
	Upper	6.36	6.74	5.47	
Field of study	General	81.12	79.12	85.71	16.21***
	Technique	18.88	20.88	14.29	
***$p < 0.01$; **$p < 0.05$; *$p < 0.1$					

Source: Author, 2023.

The analysis in Table 2 also shows that the majority of young people (81.12%) received general training (general programs, education, literature and arts, social sciences, business and law, services) compared to 18.88% who had received technical training (science, mathematics and computer science, engineering, process industries and production). Young engaged or married people (50.91%) had more jobs than their single (45.68%) and separated (3.81%) counterparts. These descriptive statistics also show that young people who are employed come from households where their parents have no level of education. Indeed, 75.15% and 90.19% of these young people had uneducated fathers and mothers, respectively. In addition, among those who had a job, 35.04% worked during their training compared to 64.96% who did not work during their course.

Table 2 shows that 58.54% of young people say that their training is not in line with the job they hold, compared with 41.46% who say they have a job that is in line with their training.

Table 2. Descriptive statistics—training-employment mismatch.

Adequacy of training and employment	Frequency (%)
Not	58.54%
Yes	41.46%
Total	100%

Source: Author, 2023.

4.2. Logistic Estimation of Job Ownership

The results of the estimate (Table 3) show that the coefficients associated with the variables age, level of education, work in pursuit of studies, and field of study of the young person are significant at the 1% level. In addition, with the exception of the head/spouse modality, all the coefficients of the other modalities of the family relationship with the household head variable are significant at the 1% threshold. Similarly, those of the separated/divorced/widowed modalities, secondary respectively of the variables "Civil status" and the father's level of education are significant at the 5% threshold. Individuals in the 20 - 24 and 25 - 29 age groups were 2038 and 4459 times more likely to be employed, respectively, than those in the 15 - 19 age group were.

Graduates who have a parent-filial relationship (son/daughter, brother/sister/father/mother) and another relationship with the household head are 0.389, 0.265, and 0.326 times less likely to get a job, respectively, compared to their counterparts who have no relationship with the household head. People with Separated/Divorced/Widowed status were 1.838 times more likely to get a job than single people. In addition, young graduates whose fathers have a high school education are 0.670 times less likely to get a job than those whose parents did not go to school. This result could be explained by the fact that young people whose parents have no level of education are less demanding or even flexible in terms of the supply of work than those whose parents have a level of education.

Young people who worked while continuing their education were 8.835 times more likely to get a job than those who did not work during the training period. On the other hand, those with secondary and tertiary education were 0.302 and 0.176 times less likely to get a job, respectively, than those with primary education. These results can be explained by the structure of the labor market, which provides fewer opportunities for those with a high level of education. Our results also indicate that youth who have received technical training are 0.648 times less likely to own a job than those who have received general education. As Benin's economy is a service and redistribution economy, fewer specialized companies are capable of absorbing technical skills.

Table 3. Results of the first logistic estimate of job ownership.

Variables	Coefficients	Odds ratio
Age		
15 to 19 years old	Reference	
20 to 24 years old	0.712***	2.038***
	(0.125)	(0.254)
25 to 29 years old	1.495***	4.459***
	(0.162)	(0.722)
Relationship to the head of household		
No link	Reference	
Chief/Spouse	−0.338	0.713
	(0.312)	(0.223)
Son/daughter	−0.944***	0.389***
	(0.283)	(0.110)
Brother/Sister/Father/Mother	−1.327***	0.265***
	(0.380)	(0.101)
Other link	−1.120***	0.326***
	(0.314)	(0.103)
Marital status		
Bachelor	Reference	

Continued

Fiancé (e)/Groom (e)	0.160	1.174
	(0.173)	(0.203)
Separated/Divorced/Widowed	0.609**	1.838**
	(0.281)	(0.516)
Father's level of education		
No schooling	Reference	
Primary	−0.216	0.806
	(0.131)	(0.106)
Secondary	−0.400***	0.670***
	(0.139)	(0.0933)
Upper	0.00742	1.007
	(0.294)	(0.296)
Mother's level of education		
No schooling	Reference	
Primary	−0.0407	0.960
	(0.152)	(0.146)
Secondary	−0.348	0.706
	(0.241)	(0.170)
Upper	0.0747	1.078
	(0.598)	(0.644)
Work while continuing studies		
Not	Reference	
Yes	2.179***	8.835***
	(0.130)	(1.150)
Educational attainment of the youth		
Primary	Reference	
Secondary	−1.197***	0.302***
	(0.119)	(0.0360)
Upper	−1.735***	0.176***
	(0.285)	(0.0502)
Field of study		
General	Reference	
Technique	−0.434***	0.648***
	(0.164)	(0.106)
Constant	0.0836	1.087
	(0.290)	(0.315)
Observations	2692	2692
Standard errors in parentheses, ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$		

Source: Author, 2023.

Thus, the profile of the person most likely to obtain employment is as follows: being in the 25 to 29 age group, having no connection with the head of the household, being separated/divorced/widowed, having a father who is not in school, working while continuing their education, having a primary level of education, and having studied in the general field.

4.3. Logistic Estimation for Score Calculation

Table 4 presents the logistic estimates of job ownership used to calculate the score. Individuals included in this estimate were employed. The terms and conditions chosen are those that offer the best chances of owning a job based on the results in Table 3. For example, if we consider the age variable, we see that the SDG ratio of the 25 to 29 years old modality is higher than that of other age groups. The young person most likely to get a job must be in the 25 - 29 age group. The profile was determined for all variables according to odds ratio analysis.

Table 4. Results of the second logistic estimate of job ownership for the calculation of the score.

Variables			Coef.
Age	"0"	Other	Reference
	"1"	25 to 29 years old	1.516***
			(0.119)
Relationship to the head of household	"0"	Other	Reference
	"1"	No link	0.827***
			(0.285)
Marital status	"0"	Other	Reference
	"1"	Separated/Divorced/Widowed	0.735***
			(0.273)
Father's level of education	"0"	Other	Reference
	"1"	No schooling	0.335***
			(0.1)
Work while continuing studies	"0"	Not	Reference
	"1"	Yes	2.107***
			(0.126)
Educational attainment of the youth	"0"	Other	Reference
	"1"	Primary	1.343***
			(0.112)
Field of study	"0"	Technique	Reference
	"1"	General	0.527***
			(0.141)
Constant			−2.611***
			(0.146)
Observations			2692
Standard errors in parentheses, ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$			

Source: Author, 2023.

Based on the results of the second estimate, the calculated score is 99.17%. A person with the following profile, being in the 25 - 29 age group, having no connection with the head of the household, being separated, divorced, or widowed, having a father who is not in school, working while studying, having a primary level of education, and having studied in the general field, has a 99.17% chance of being employed.

4.4. Logistic Estimation of the Adequacy of Training and Employment

Table 5. Results of the logistic estimation of the training and employment adequacy.

Variables	Coefficients	Odds ratio
Age		
15 to 19 years old	Reference	
20 to 24 years old	0.699**	2.012**
	(0.356)	(0.716)
25 to 29 years old	1.224***	3.401***
	(0.367)	(1.247)
Marital status		
Bachelor	Reference	
Fiancé (e)/Groom (e)	−0.087	0.917
	(0.272)	(0.250)
Separated/Divorced/Widowed	−0.406	0.666
	(0.519)	(0.346)
Internship during studies		
Yes	Reference	
Not	−1.138	0.320
	(0.785)	(0.251)
Work while continuing studies		
Not	Reference	
Yes	−0.462	0.630
	(0.297)	(0.187)
Educational attainment of the youth		
Primary	Reference	
At least secondary	0.499**	1.647**
	(0.244)	(0.402)
Field of study		
General	Reference	
Technique	1.995***	7.350***
	(0.570)	(4.192)
Constant	0.082	1.086
	(0.821)	(0.892)
Observations	350	
Standard errors in parentheses, ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$		

Source: Author, 2023.

The results of the estimates (**Table 5**) show that the 25 to 29 years old modality of the "Age" variable and the technical modality of the field of study variable are significant at the 1% level. In addition, the 20 to 24 years old and "at least secondary" modalities of the variable "Level of education" are significant at the 5% threshold.

Young people with at least a high school education are 1.647 times more likely than those with a primary level education to be a good fit. In other words, young people with high levels of education are less likely to be mismatched. Indeed, as the theory of labor market segmentation (Doeringer & Piore, 1971) states, an individual with a high level of education, the upper segment of the primary market, is more likely to have his or her qualifications and skills adapted to the jobs compared to their lower-skilled counterparts in the lower stratum. Therefore, less-qualified people find themselves in a kind of underskill trap (Wong, 2020). These results are opposite to those obtained by Chama-Chiliba et al. (2022) in Zambia. Their work showed that younger employees with a lower level of education (primary and lower) are less likely to be poorly adapted to employment. On the other hand, the results corroborate those obtained by Vivatsurakit and Vechbanyongratana (2021), who indicate that in Thailand, young educated workers are increasingly absorbed by low-skilled informal work in private companies and face significant wage penalties for overeducation.

Youths in the 20 to 24 age group and in the 25 to 29 age group are 2.012 and 3.401 times more likely than those in the 15 to 19 age group to be in a suitable fit situation, respectively. Generally, the older the age, the higher the level of education and the more likely the young person is to have gained experience and is more likely to have his or her skills fit for the job. This result can be explained by the fact that work experience during training strengthens young job applicants' social capital (Murillo et al., 2017). Thus, the probability of having a permanent job is positively affected by the skills accumulated during various internships carried out by the young person, especially in the case of full-time jobs related to the training diploma (Carnevale et al., 2015). In addition, young people who have received technical training are 7350 times more likely to be in line with the job they will be able to get. In other words, the skills of young people who have studied in technical fields such as mathematics, computer science, engineering, processing industries, and manufacturing are more likely to be relevant to their jobs. These results are in line with those of Salas-Velasco (2023), who points out that graduates with specific human capital, particularly in the fields of health, exact sciences, and engineering, are more likely to hold a position corresponding to their skills. However, it is clear that young people who have received technical training are less likely to be employed than those who have received general education. These results could be explained by the lack of work-related skills and competencies, as Leuven and Oosterbeek (2011) pointed out among young people who have received technical training.

5. Conclusion

Young people have high levels of education to provide themselves with more opportunities in the job market. In their field of training, they hope to obtain an adequate profile regarding employment. This article deals with the horizontal mismatch that makes it possible to analyze the correspondence from the graduate's field of training to the position by identifying the field of training that most guarantees it. To this end, the profile and score of a young person who is likely to obtain a job are determined in Benin. The estimation results show that, in Benin, job ownership is related to age, level of education, and field of study. The results also indicate that young people who engage in an academic internship related to their field of training are more likely to access a job than their counterparts who do not. They also show that the youth most likely to be employed are those in the 25 - 29 age group, who are not related to the head of the household, who are separated/divorced/widowed, whose father is not in school, who are working while in education, who have a primary education, and who have been educated in the general field. Such young people have a 99.17% chance of having a job.

To address the issue of training-to-job matching, the results identify the field of study, level of education, and age as factors likely to explain whether training is a match between training and employment. Indeed, in Benin, it can be concluded that young people who have undergone technical training obtain jobs that correspond to their field of basic training. On the other hand, those who find a job quickly follow the general education. In view of these results, to ensure a match between training and employment in Benin, it is necessary to orient learners towards technical professions from primary school onwards and to strengthen the mechanisms for transitioning to employment (system of alternation between school and business, mixing between the educational and professional worlds, à la carte training). However, a more integrated approach, reconciling technical and general training, is needed to mitigate the risk of reduced labor market flexibility caused by early specialization. Therefore, a paradigm shift is necessary. To this end, for the optimal use of jobseekers, it is urgent to increase the absorption capacity of the labor market by aligning it with the structural transformation initiated by the Beninese economy. The paradigm shift must take place by establishing a mechanism of trust between the components of society, in particular the state, the private sector, and the actors of the education system. This requires an emphasis on collaboration between companies and training institutions by tailoring training programs to the needs of the labor market.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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