



## **CONTRIBUTION OF THE LABOR MARKET TO POVERTY REDUCTION IN CHAD**

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### **Abstract**

*The objective of this paper is to analyze the contribution of the labor market to poverty reduction in Chad in a context of spatial dependence by focusing on the role of labor market segments. To achieve this objective, a logistic regression model was estimated on secondary data from the ECOSIT4 survey on consumption and the informal sector in Chad conducted in 2018. The results showed that private sector employment, urban status, and male gender significantly reduce the risk of poverty. Conversely, the risk of poverty increases with the public sector, the associative enterprise, and employing households. Similarly, heads of households with primary and higher education are exposed to the risk of poverty. The results of the effects obtained simply confirm the results of the estimation. These results make it possible to recommend the implementation of provincial plans to fight poverty in Chad and policies to support employment in both the private and rural sectors.*

*Keywords: Poverty, labor market, Chad, ECOSIT4, logit*



## INTRODUCTION

On the eve of the Millennium Development Goals, the fight against poverty and galloping unemployment has become the main priority of sustainable social development programs in Africa in general and in Chad in particular. The issue of poverty, and specifically the relationship between the living conditions of populations and access to the labor market, is increasingly the subject of research these days. In order to significantly reduce poverty, the choice and success of anti-poverty policy options depend on a good knowledge of the socio-economic characteristics of the most vulnerable populations as well as their geographical targeting. For this reason, the labor market appears to be a privileged framework for analysis (Ballaing, 2000). However, at the theoretical level, the interest of analyzing poverty through the mediation of variables and the structure of the labor market is twofold. On the one hand, the labor market is the center of redistribution of the fruits of growth (Razafindrakoto and Roubaud, 2001). In classical economics, national income is used to list the factors of production (labor and capital). However, the most important asset of the poor is their labor force (OECD, 2009), and they only benefit from the fruits of economic growth if they come from the sectors that employ the poorest people. The issue of employment is all the more worrying in the fight against poverty because all populations in developing countries derive their income from work. More than anywhere else, any dysfunction in the labor market reflects the deterioration in the living conditions of the populations and, conversely, any improvement in the functioning of the labor market must be at the center of policies to fight poverty.

On the other hand, the labor market chosen as a framework for analysis is dictated by the determinants that allow the concept of poverty to be characterized have a link with this market. Its variables are considered by economic theory as the bridge between poverty and the labor market. These variables are considered by economic theory to be the bridge between poverty and the labor market. Among others, long-term unemployment, also known as "exclusionary unemployment", is at the center of controversies on poverty, since people in this situation gradually settle into a cumulative spiral of social marginalization, while income (salary) is the indicator most often used to define the poverty line. Given that households must find employment in order to earn income, poverty can logically be interpreted as inaccessibility to employment, education, one of the key variables in the functioning of the labor market, whose influence through human capital is demonstrated by human capital theories (Schultz, 1961; Becker, 1964). The debates on the adequacy of schooling to the needs of the domestic labor market have reemphasized the importance of this variable in antipoverty policy choices. There are also other variables - regulatory norms, migration, etc. - that have a link with the labor market and demonstrate the interest in analyzing it through the labor market. However, there is

a long literature that draws on the ideals of the World Bank and stems from the pioneering work of Kuznets (1955) to explain poverty as a result of low economic growth. Insofar as the World Bank asserted that the main factor in reducing poverty is accelerated growth (World Bank, 2001), the Poverty Reduction Strategy Papers (PRSPs) drawn up at that time were based on a macroeconomic framework designed to promote growth, supplemented by sectoral policies targeting the poorest populations (Cling et al. 2002). However, it must be recognized that while these measures are certainly useful, they remain of limited effectiveness in Chad because they have concealed the central role of the labor market in the process of transmission and redistribution of the fruits of growth to the poor. Chad is ranked 187th out of 189 countries in 2019 with an HDI of 0.398 (UNDP Report, 2019), remaining one of the poorest countries on the planet. Data from the National Institute of Statistics, Economic and Demographic Studies in Chad (INSEED, 2018) from the Chad Household Living Conditions and Poverty Surveys (ECOSIT4, 2018) reveal that in 2018, 42% of the Chadian population lived below the poverty line which is 46.7% nationally.

Chad has recently witnessed structural imbalances in the labor market and a dramatic increase in unemployment. The unemployment rate for young graduates rose from 42% in 2015 to 60% in 2017 (ECOSIT 3, 2011). The surge in the price of consumer goods following the 2008 global economic crisis and the drop in the price of a barrel of oil in 2014 have deeply affected the purchasing power of Chadian households, especially the poor, and have increased the incidence of poverty and social exclusion. In a country like Chad, where the most abundant factor of production is labor with approximately 70,000 young graduates entering the market each year (ECOSIT4), a reframing of poverty reduction policy that puts the labor market and regional dependence at the center is essential.

The other aspect of poverty in Chad that has been little studied is its spatial dimension. However, data from the Living Conditions of Poor Household Surveys (ECOSIT4) reveal that there are provincial disparities in poverty, which could be explained by the differences in employment opportunities that exist there. However, the living conditions of individuals depend on their personal attributes, but also on the opportunities and constraints specific to their place of residence, their region or the municipality to which they belong (Courgeau and Baccaini, 1997). It is therefore important, in order to better understand the phenomenon, to analyze its determinants, including employment (Lachaud, 1998), within the broader framework of regional interdependencies. While poverty may be linked to individual or household characteristics, it may also be influenced by regional and spatial characteristics. This is why Lachaud argues that the issue of the spatial distribution of economic activities and opportunities is of primary importance for targeting actions in favor of the most disadvantaged groups. However, this

spatial dimension of poverty in relation to the labor market is imperfectly taken into account in many economic studies. The main thrust of this work will therefore be to examine the determinants of poverty, focusing on the contribution of the labor market to poverty reduction.

## LITERATURE REVIEW

### Theoretical approaches

The issue of labor supply and demand goes back a long way. Since the first works of the classics, labor has been an important component of economic analysis. Two main lines of thought confront each other:

Orthodox neoclassical authors (Marshall 1890; Walras; 1874), following Smith, consider labor as an ordinary good subject to exchange on a competitive market. The idea of endogenous growth born from the pen of Schultz (1961) and Becker (1964) will be developed by Gambier and Vernieres (1985) who show that labor is a human capital while maintaining the neoclassical vision. In this vision, any imbalance in the labor market is the result of a downward rigidity of prices (the wage). All unemployment is therefore voluntary and the reduction of unemployment (and therefore of poverty linked to the lack of employment) must involve the removal of wage barriers and rigidities. These solutions will be challenged by the work of heterodox authors (Loveridge and Mok, 1981), *The theory of segmentation* for whom labor is a specific good. The labor market is balkanized and each homogeneous segment functions differently and there are specific barriers to entry to each segment. Poverty and unemployment arise from the difficulty for the vulnerable, poor and poorly educated to access better paying market segments. The poor are therefore condemned to remain in this vicious circle without intervention.

Another explanation of unemployment comes from *the theory of implicit contracts*. Its authors (Baily, 1974; Azariadis, 1975) show that the labour market is managed by contracts between unions and employers, so that neither wages nor the volume of employment necessarily reflect an equilibrium between labour supply and demand. The reduction of unemployment must therefore involve a revision of these contracts. *The efficiency wage theory* (Leibenstein, 1974; Mirlees, 1975; Stiglitz, 1976) explains that employers offer higher wages to competent and more productive managers in order to retain them. Thus, to reduce poverty, it is important to train workers to enter the privileged circle of well-paid workers.

In sum, the implicit contract and efficiency wage models have shed light on how employers and employees manage the risk underlying the incompleteness of the labor contract (labor power cannot be equated with a simple commodity whose properties are completely specified). In these models, the central idea is that the sustainability of the relationship between

employees and employers (and for the latter, the need to encourage employees to improve their productivity), implies that the wage relationship is organized in a very specific way.

All these theories consider only individual relations, yet workers are now grouped into unions that conduct negotiations. Hence the *theory of wage bargaining* developed according to two models: the right-to-manage model, which is based solely on wage bargaining, and the efficient bargaining or "optimal contracts" model (Mac Donald, Solow, 1981), which is based on the bargaining of employment and wages. Thus, employment and wages, the main determinants of poverty, are explained by contracts. Another theory, "*The Share Economy*" by M. Weitzman (1984), also maintains that the determination of wage parameters is mediated by negotiations between unions and companies. The challenge of all these theories is to give, above all, an explanation of unemployment via poverty.

### **Empirical studies**

Empirical analysis of the labor market in relation to poverty is more recent. The modeling of poverty and the labor market has been the subject of several studies, most of which were aimed at identifying the segments of the labor market that affect poverty. Thus, Aynaoui (1998) based on data from Morocco, has shown the existence of a relationship between the way the urban labor market operates and poverty in developing countries.

Lachaud (1998), using a Multinomial Logistic Model (MLM), modeled the determinants of poverty and the labor market in Burkina Faso in 1994-1995. The main objective was to measure the influence of poverty on the labor market segments and vice versa. The results obtained show that unemployment is more specific to urban areas than to rural areas, given the extent of family support, particularly in agriculture. He then showed that in Burkina Faso "the risk for a household to be in the poorest quintile, rather than in the richest quintile, is highest when the household head is a subsistence farmer or unemployed. Thus, the probability of extreme poverty in Burkina Faso is highest in households headed by subsistence farmers or unemployed persons.

Ouadika (2009) analyze the link between poverty and the labor market in urban Congo, insists on one point: "the study of the link between unemployment and poverty is justified by the fact that poverty is a direct consequence of the disintegration of the socio-economic system. However, it leads to the paradoxical result that the unemployed are less poor than the inactive and workers in the informal sector. This situation could be explained by the transfers received by households whose head is unemployed

In Benin, a study on the econometric analysis between poverty and the labor market shows that, all other things being equal, the transition of the head of the household from

salariated worker in Cotonou to self-employed or salariated worker in the rural sector reduces the group's adjusted real expenditure by almost 40%. And people working in the informal sector or in agriculture are mostly poor. (Hodono, 2008)

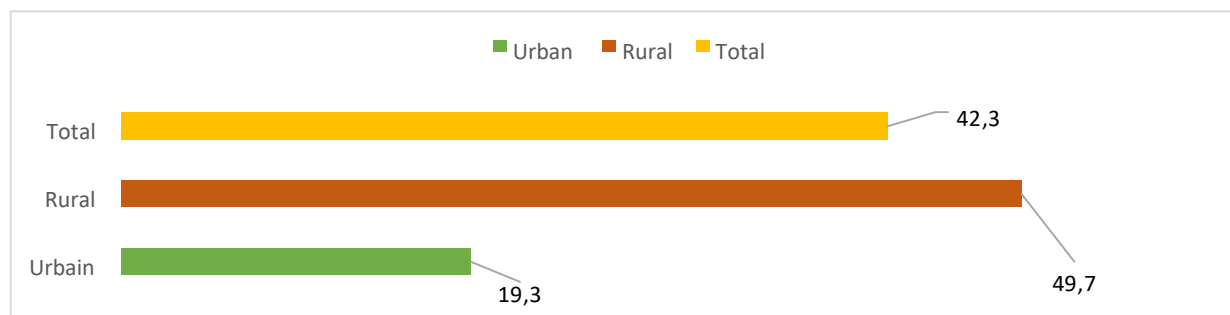
In sum, all of these studies agree that there is a strong relationship between labor segments and poverty. The main focus of this paper will be to examine the contribution of the labor market to poverty reduction in Chad.

## POVERTY AND ACCESS TO THE LABOR MARKET IN CHAD: STYLIZED FACTS

Analysis of poverty in terms of its measurement or index, depth, severity and extreme poverty shows that, in general, poor households in Chad are more concentrated in rural than in urban areas.

The incidence of poverty by area of residence is highlighted in the graph below. According to the ECOSIT 4 survey, nearly half of rural residents are poor (49.7%), compared to nearly one-fifth of urban residents (19.9%). The proximity of the rural rate to the national rate is due to the fact that most households at the national level live in rural areas (the urbanization rate is 24%). The same survey found that unemployment in the broad sense affects more women (26.8%) than men (10.3%). This can be explained by the fact that the majority of women, even educated women, spend their time doing household chores, which reduces their time and effort to look for a job. Similarly, unemployment in the broad sense of the term is still higher in urban areas (19.7%) than in rural areas (13.9%). In addition, the level of unemployment in the broad sense of the term in the population aged 15 and over is higher among women (26.8%) than among men (10.3%), regardless of their place of residence.

Figure 1 Incidence of poverty by place of residence (%)

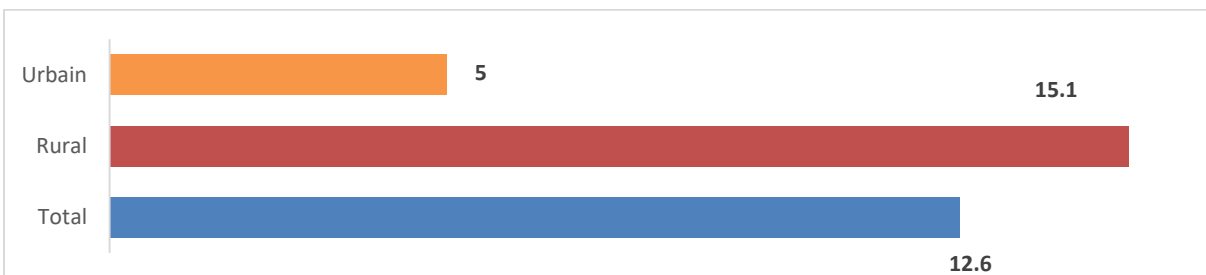


Source: The author using ECOSIT4

The depth of poverty is the average proportional deviation of per capita expenditures of poor households from the poverty line or the average of the differences between per capita

expenditures of poor households and the poverty line. The graph showing the depth of poverty by area of residence shows that poverty is almost ten points deeper in rural areas (15.0%) than in urban areas (5.3%). Thus, households in rural areas must spend 15% of the poverty line (i.e., 36,290 FCFA) for each of their members per year in addition to their usual expenses to be above the poverty line. In the city, however, households only need to increase their per capita spending per year by 5.4% (13,066 FCFA) of the poverty line to be non-poor.

Figure 2 Depth of poverty by area of residence

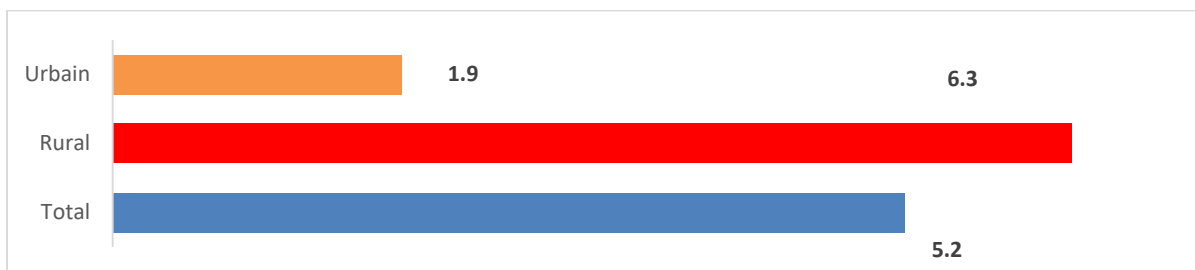


Source: The author using ECOSIT4

The severity of poverty is the average of the squared differences between the poverty line and the average expenditure of poor households. In other words, it is a measure of disparity among the poor. At the national level, the severity of poverty is estimated at 5.2 percent. Figure 4.5 shows that inequality among the poor is greater in rural areas (6.3%) than in urban areas (1.9%).

Most of the poor are in rural areas, as shown above, nearly half of the rural population is poor (rate is 49.7%). Moreover, the disparity is more pronounced among the rural poor. The rural environment is therefore the focus of extreme poverty. Not only is half the rural population poor, but it is extremely poor.

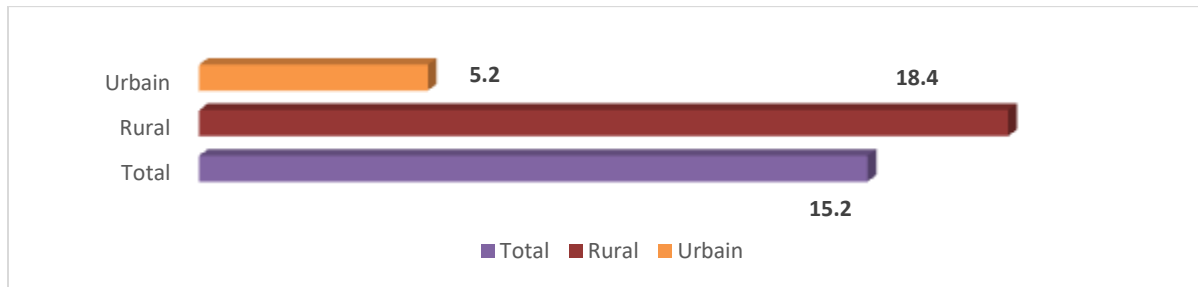
Figure 3: Severity of Poverty by Place of Residence



Source: The author using ECOSIT4

As for situations of extreme poverty characterized by the inability of a person to cover his or her food needs or that his or her total consumption expenditures (food and non-food) always remain below the amount required to cover his or her nutritional needs (2,300 Kcal). Thus, in Chad, 15.2% of the population is extremely poor. This rate is 5.2% in urban areas and 18.4% in rural areas.

Figure 4: Extreme Poverty by Place of Residence



Source: The author using ECOSIT4

## METHODOLOGY

### Model and estimation techniques

The methodology is inspired by Mincer (1958) and Chennouf et al (1997). However, given that our poverty data are hierarchical, the logit model will be adapted for our present study. The econometric model is presented as follows:

$$pauverty_i = \beta_0 + \beta_1 GSE_i + \beta_2 niveduc_i + \beta_3 age_i + \beta_4 sexe_i + \beta_5 dim_i + \beta_6 MR_i + \beta_7 PV_i + \varepsilon_i \quad (1)$$

With  $gse_i = (entrpub, entrpri, entrass, Menemp, orgainter)$ ,  $niveduc_i = (mater, prim, second\ gnr1, second\ gnr2, postsecon, sup)$ , DIM (dimension or size), MR (milieu de résidence), PRV (province)

Where Poverty is the explained variable;  $\beta_0$  is the constant term;  $\beta_i$  ( $i=1, 2, 3, 4, 5, 6, 7$ ) represent the coefficients of the exogenous variables and  $\varepsilon_i$  is the error term.

Before estimating the model, preliminary statistical tests as well as the chi-square test of dependence are performed to ensure the robustness of the results. Because of the qualitative nature of the dependent variable and the law followed (the explanatory variables do not automatically follow a normal law), we will estimate the model using logistic regression. The model give the possibility to know not only the set of explanatory variables that have a significant effect on the dependent variable, but also the direction and the strength of this relationship. Moreover, the interest of this model lies in the simplicity of estimating a coefficient



that measures the strength of association between poverty ( $Y_i$ ) and the explanatory variables ( $X_i$ ). The probability associated with the possibility of being poor under the constraint of the variables *gse*, *niveduc*, *age*, *sex*, *dim*, *mr*, and *prv* is obtained statistically by :

$$Y_i = \frac{e^{b_0 + b_1 X_1 + b_2 X_2 + \dots + b_n X_n}}{1 + e^{b_0 + b_1 X_1 + b_2 X_2 + \dots + b_n X_n}} \quad (2)$$

$Y_i =$  POVERTY is the dependent variable captured by the annual wage threshold. It is coded 1 if the individual is poor, i.e. the individual has an annual salary below the threshold equal to 435.97\$, and 0 if not.

" $b_0$ " is the ordinate at the origin

" $e$ " is the base of the natural logarithm, i.e. the neperian constant of 2.718

" $b$ " is the matrix of the respective regression coefficients of each model

" $x_1$ " = GSE (socio-economic group)

" $x_2$ " = level of education (kindergarten, primary, secondary1, secondary2, post-secondary and higher)

" $x_3$ " = annual age of the head of the household

" $x_4$ " = gender (0 for male and 1 for female)

" $x_5$ " = dimension or size of the household

" $x_6$ " = place of residence (1 for urban and 0 for rural)

" $x_7$ " = province of the individual.

Since the study assesses the relationship between poverty and its determinants, and since the endogenous variable is dichotomous, logistic regression is used as the analytical framework. The probability of financial inclusion ( $\Pr(Y_i = 1/X_i)$ ) depends on a set of explanatory variables ( $X_i$ ). The aim is to explain the occurrence (or non-occurrence) of each event. For example, the typical credit event that takes two values:  $y = \{0; 1\}$ . We have:  $P(Y = y | X) \in [0; 1]$  Whatever the values of  $X$ , the value of  $P$  always remains between 0 and 1.

$$p_i \equiv \Pr(y_i = 1 | X_i) = F(X_i \beta) \quad (3)$$

For  $P_i$  to be a probability, we take the exponential function to ensure positivity and a norm to ensure the upper bound. The probability that the relationship *gse*, *niveduc*, *age*, *sex*, *dim*, *MR*, *PRV* significantly influences poverty in a logistic regression is given by :

$$p_i = P(y_i = 1 | X_i) = \frac{e^{\beta X_i}}{1 + e^{\beta X_i}} \text{ et } (1 - p_i) = \frac{1}{1 + e^{\beta X_i}} \quad (4)$$

Where,  $X_i$  is the vector of independent variables and the vector  $\beta$  the coefficients to be estimated.

As in all non-linear models, the interpretation of the estimated parameters in a logit model requires caution. The parameters of the model only provide information on the positive or

negative effect ( $\beta > 0$ ) or negative ( $\beta < 0$ ) of the independent variables on the probability. In order to quantify the impact of each variable on the probability  $p_i$ , we calculate the odds ratio, which measures, for each  $X_i$ , the number  $n$  of chances that an independent variable will significantly influence the result, compared to one chance that it will not. This ratio corresponds to the ratio:

$$Oddsratio = \frac{\Pr(y_i = 1|X_i)}{1 - \Pr(y_i = 1|X_i)} = e^{\beta X_i} \Leftrightarrow \ln\left(\frac{\Pr(y_i = 1|X_i)}{1 - \Pr(y_i = 1|X_i)}\right) = \beta_0 + \beta_i X_i + \mu_i \quad (5)$$

Expression (5) measures the number of times of occurrence of  $y_i = 1$  for a given independent variable versus one time of failure. Considering expression (4), the marginal effect of the  $j^{\text{th}}$  explanatory variable  $X_i^{[j]}$  is defined by :

$$\delta_i = \frac{\partial p_i}{\partial X_i^{[j]}} = \frac{e^{\beta X_i}}{(1 + e^{\beta X_i})^2} \beta_j \quad (6)$$

$\delta_i$  is easier to interpret and it describe the effect of a unit change in a given variable on the likelihood that financial inclusion is deemed to be successful. Note that it is also possible, for continuous variables, to estimate elasticities. To estimate the logit model, the maximum likelihood method is used. It consists in finding the value of the parameters that maximize the likelihood of the data. The log likelihood function is written :

$$\begin{aligned} L(\beta_0, \beta_1) &= \text{Log}(l(\beta_0, \beta_1)) = \text{Log}\left[\prod_{i=1}^n \pi(x_i)^{y_i} (1 - \pi(x_i))^{1-y_i}\right] \\ &= \sum_{i=1}^n y_i \text{Log}\left(\frac{\pi(x_i)}{1 - \pi(x_i)}\right) + \text{Log}(1 - \pi(x_i)) \\ &= \sum_{i=1}^n y_i (\beta_0 + \beta_1 x_i) - \text{Log}(1 + \exp(\beta_0 + \beta_1 x_i)) \quad (7) \end{aligned}$$

Estimators obtained by maximizing the maximum likelihood function are efficient. These estimators can also be obtained by maximizing the log likelihood because the maximum likelihood function and its logarithm reach their maximum at the same point.

If  $\beta > 0$  it means that the probability of the event occurring increases with the corresponding variable. If  $\beta < 0$  this means that the probability of the event occurring decreases with the variable

**Data source**

This paper use data from the ECOSIT4 survey on consumption and the informal sector in Chad conducted in 2018. This survey was conducted on 7493 households in different provinces in Chad.

## RESULTS

The table below summarizes the results for the determinants of poverty in Chad. The  $\chi^2$  values associated with poverty show an overall significance at the 1% level with a relatively low pseudo  $R^2$ . This may be explained by the multitude of variables explaining poverty, and the multidimensional nature of the variable itself.

Intrinsically, the results table shows that the socio-occupational category is significantly related to the risk of poverty of the individual or household. Belonging to the socio-occupational category of individuals working in the "public and/or para-public sectors", "domestic workers" and "associative enterprises" leads to a greater chance of being exposed to the risk of poverty. The signs associated with these two modalities are positive and significant at the 5% and 1% thresholds respectively.

The results show that households working in the public or parapublic sector are more likely to have a low standard of living. For most of the individuals working in these sectors, the levels of remuneration are often very low and do not allow them to meet their daily needs. In addition, the results show that individuals working in "private companies" are less exposed to the risk of poverty. The coefficient associated with this modality is positive and significant at the 1% level.

Table 1: Results of the logistic regressions

Poverty	Coeff.	Prob
Work status or GSE		
Public/pre-public company	0,6978414**	0,023
Private Company	-1,419811***	0,000
Company association	1,008359***	0,005
Household employer	1,614307***	0,000
Organ internship /Ambas	0,2277453	0,657
Level of education		
Maternal	3,367421***	0,007
Primary	-0,1290861	0,623
Second. gl 1	-0,0290231	0,917
Second. gl 2	0,032575	0,902
Postsecondary	0,0898606	0,858
Superior	0,3102846	0,152

Household characteristics		
Agean	-0,0024888	0,687
Sexh	-0,6120115***	0,009
Dim	-0,320367	0,195
MR	-0,7099761***	0,001
Province	0,0451638***	0,023
_pictures	-1,249914	0,037

Source: the author using data from ECOSIT 4(2018)

Wald  $\chi^2$  (16) = 238.78 Log likelihood = -825.90897 Prob >  $\chi^2$  = 0.0000 (\*\*\*), (\*\*), (\*),  
Significance at 1%, 5%, 10% threshold

The education variable only explains poverty through its "maternal" modality. Contrary to all expectations, a high level of education does not allow households to protect themselves from the risk of poverty. The "maternal" modality is thus strongly positive and significant at the 1% threshold in explaining the risk of poverty. We can thus deduce that households in Chad are more exposed to the risk of poverty. Despite the non-significance of the other modalities of the education variable, the associated coefficients are positive. The causes of the risk of poverty lie elsewhere than in education. The result obtained corroborates that of Lachaud (1998) who shows that having a low level of education is the major cause of poverty in Burkina Faso. Abessolo (1997) analyzes the link between education and labor market participation in Cameroon and finds a different result. He concludes that a high level of education favors access to the labor market and increases the probability of belonging to a higher income quintile and thus a lower risk of poverty.

With regard to household characteristics, three effects can be identified. First, the gender of the *household in question* affects the poverty situation, then *the area where the household lives* and finally *the province*.

Gender has a significant effect at the 1% level on the risk of poverty. If we consider this modality linked to men, the negative sign shows that the households headed by men have a lower risk of poverty. This is logical insofar as women in Chad are more discriminated against and relegated to the background, reducing their chances of certain opportunities.

In the same case, the effect of the modality residence, is significant at the 1% threshold on poverty and is negatively related to it. Taking into account the urban area, the negative sign shows that belonging to an urban area reduces the risk of poverty, unlike in rural areas. The

result confirms that poverty in Chad is a rural phenomenon. Rural populations are therefore the most vulnerable to poverty, and national poverty reduction strategies must therefore focus on rural areas as a priority, despite the problems associated with climate change, drought, and the underdevelopment of communication and transportation networks that allow rural people to export their agricultural products to the cities.

The *province* modality is significant at the 5% level. Two cases have made it possible to distinguish this modality according to whether the household's living area is in the provinces or in the capital. Disparities in terms of employment opportunities are becoming less pronounced in Chad, given that everything is centralized in the country's capital. The attractiveness of the capital to businesses has led to an unlimited increase in the rural exodus, leaving some provinces almost empty. Belonging to other provinces increases the risk of being poor even more. This situation can also be explained by the low level of urbanization of the provinces to the detriment of the capital cities (economic and political).

Marginal effects of individual variables (table 2) show that moving from inactive to employed status in a private company reduces the risk of poverty by 0.003%. The employee of a public company and the international organizations have respectively 0.055% and 0.014% increase in their poverty risk. These marginal effects show that public employees are not well treated and do not benefit from certain opportunities as private employees do. These show the precarious working conditions, in which employers in these sectors offer. The state must therefore improve the necessary working and living conditions.

Through the gender variable, it appears that belonging to the *male* modality reduces the risk of poverty by 0.00006%. Women are more exposed to the risk of poverty. This is because women are always reduced to housework, which limits them to certain tasks that men do, even though nowadays there is much more talk of emancipation and gender equality.

Moving from a rural to an urban household reduces the poverty risk of the head of the household by 0.018%. The presence of infrastructure (transport, electricity, health, education, etc.) combined with opportunities for income-generating activities are factors that stimulate economic development in urban areas. Agriculture is the main activity in rural areas, which suffer from problems such as lack of rainfall, drought, etc. Living in Chad's capital city reduces the risk of poverty by 0.001% despite income-generating activities, employment opportunities and other related benefits that contribute to the fight against poverty.

Table 2: Marginal effects estimation results

Poor	dy/dx
Work status or GSE	
Public company	0,0556164
Private Company	-0,003048906
Company association	0,0907795
Household employer	0,1808279
Organ internship /Ambas	0,0149955
Level of education	
Kindergarten	0,3164654
Primary	-0,0030429
Second. gl 1	-0,0007132
Second. gl 2	0,0008213
Postsecondary	0,0023205
Superior	0,0087917
Household characteristics	
Sexh	-0,000064
Agean	-0,0157395
Dim	-0,0008239
MR	-0,0182589
Province	0,0011615

Source: the author using data from ECOSIT 4(2018)

## CONCLUSION

The aim of this paper is to examine the factors influencing poverty in Chad. Among the bulk factors which are consider, we include principally variables related to labor market. After estimation of a simple logistic model on survey data of ECOSIT 4 of 2018, the results show that the labor market in Chad contributes significantly in the explanation of poverty. Specifically, the results conclude that apart from individuals in the private sector, poverty risks are higher for those working in other sectors in particular the public sector. Contrarily to the public sector of employment, working in the private sector is important for reducing the risk of poverty and offers the best living conditions and a low probability of being poor. Against all expectations, the results showed that certainly the households whose heads of household is of primary education level are exposed to the risk of poverty differing to the other sectors that do not explain it. The transition from urban to rural areas exposes individuals to the risk of poverty. In other words,

poverty is always a rural phenomenon. It would be important for the Chadian government to strengthen and promote the education system, especially at the primary level. It remains also important to align the conditions and functioning of the public service with the standards of private institutions like wage and social treatments. Finally, it is important to improve living conditions in rural areas. Future research could examine the contribution of different socio professional categories in the reduction of poverty by comparing two surveys in Chad.

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