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The adverse impact of the Covid-19 pandemic on the labor market in Cameroon

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Abstract

This paper analyzes the impacts of the Covid-19 pandemic on employment in Cameroon. Using data collected from a rapid survey led by the National Institute of Statistics, on a sample of 1,310 respondents from April to May 2020. These data show that a large proportion of workers suffered a wage cut (60.93%) and temporary job suspension (31.6%), and the smallest proportion suffered job loss (7.47%). The results of the logistic regression show that lower frequency of outgoings to work, difficulties in accessing transport services and the loss of customer confidence have a strong negative impact on both wage cuts and temporary suspensions of work. The closure (total or partial) of activities has increasingly enhanced job loss. Further, the log of odds show that workers in private firms are more affected than their peers in public firms, and the middle-aged are the most affected group. So, it is recommended to revamp the old methods of activity into digital innovation that enables less physical touch and find an appropriate way to support those who have lost their jobs during this Covid-19 pandemic, particularly in the private sector.

1 | INTRODUCTION

The worst global crisis since the 1930s, the Covid-19 pandemic continues to cause unprecedented upheavals in economies and labor markets in addition to the loss of human lives. On November 6, Africa reported 1,854,169 confirmed cases with 44,316 deaths. Although the continent still has relatively fewer deaths compared to other regions, African countries might face the longest lasting adverse effects due to the meager health system and their heavy dependence on imports. Although the African health system has experienced significant improvement, Arthur and Oaikhenan (2017) and Chireshe and Ocran (2020) demonstrate that increasing public expenses to the health sector has reduced mortality rates and improved life expectancy at birth. These efforts will be directly stopped with this outbreak of the Covid-19 pandemic.

Before the pandemic, the growth estimated for 2020 on the continent by the United Nations Economic Commission for Africa (UNECA) was 3.2%. The latest forecasts show that the Covid-19 pandemic could reduce the continent's expected economic growth by −1.4%. This will impact many businesses along the value chain and decimate many jobs. The latest data from the International Labor Office on the labor market impact of the Covid-19 pandemic shows the devastating effect on workers in the informal economy, mainly due to the prolongation and expansion of containment measures. Informal employment is the main source of employment in

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Africa, providing 85.8% of all jobs. It is the space where the majority of men and women working there manage to meet their needs almost on a daily basis.

Scholars agree on the fact that policy responses to the Covid-19 pandemic must try to find enough fiscal space for the necessary public spending. Addison et al. (2020) focus on three macroeconomic implications of the slowdown in China and the rapid spread of the virus: (i) the impact on macroeconomic stability and growth; (ii) the necessary fiscal space to fund health, social protection and livelihood support; and (iii) the macroeconomic consequences—the size of the gross domestic product loss, the duration of the recession, and the outcomes for the fiscal deficit and debt ratios.

Further, adding to the direct effect of the virus on economic activity in sub-Saharan Africa, there is the hit to most export products' prices (coffee, cocoa, oil,[1] and cotton), the disruption in export supply, loss of tourism income, falling remittance flows, and a contraction in commercial finance and capital outflow. Africa's population age-profile and hot climate have considerably reduced the continent's vulnerability to the virus compared to the rest of the world.

However, the low level of technology adoption in Africa makes it difficult for activities that require movement between homes and nonessential workplaces to shift into the digital economy, as it increases a society's resilience to pandemics. Addison et al. (2020) highlight the fact that the digital economy cannot plant maize, harvest rice, sell soap in a village market, stitch clothing for export, or dig out minerals; all activities central to African economies and livelihoods such as in Cameroon. Thus, it increasingly becomes important to think about policy responses to Covid-19 in that specific context.

Before the crisis of the 1980s, the labor market in Cameroon was mainly made up of agricultural workers and the government was the main provider of employment in the formal sector. The unemployment rate was estimated at 6% in 1976, but with the crisis this rate increased rapidly and was estimated at 24.5% in 1993 according to statistics from the National Institute of Statistics (INS, 2001). We observe (Figure 1) that Cameroon experienced its worst level of unemployment during the crisis at the end of the 1980s, with negative economic growth rates. With the recovery in the 2000s, the rate fell and was estimated at around 6% in 2010 despite the 2008 crisis. In 2019, the unemployment rate stood above 13%, despite an economic growth rate of 3.9% per year. With the occurrence of the Covid-19 pandemic, which particularly affects the labor market, we expect huge consequences on the labor market. The economic growth rate had to remain at 4% in 2020, according to estimates by the African Development Bank, for a number of reasons including: the price of a barrel of oil at US $57.9, the control of inflation around 2.2%, the implementation of the emergency plan for the acceleration of economic growth, the major infrastructural works in progress and the preparations for continental sport competitions. With the outbreak of the Covid-19 epidemic, the growth rate forecasts based on previous crises (the 2007–2008 crisis and that of 2016) are for a loss of 1.2–2 points of growth according to a report from the United Nations Development Program (UNDP), as of March 31, 2020. These figures might be underestimated and could very quickly be exceeded given the current scale of the health crisis. Indeed, Cameroon is among the most affected countries by the Covid-19 pandemic in sub-Saharan Africa, after South Africa, Nigeria, Ghana and Kenya. Despite the fact that Cameroon plays a central role in CEMAC, as it holds nearly 40% of the money supply (AfDB, 2020), the country depends heavily on international trade with its main partners, China and the European Union, which are currently very affected by the health crisis.

Elsewhere, the country has to face security crises in the far north with the attacks perpetrated by the terrorist group Boko Haram, in the east on the border with the Central African Republic with rebel attacks, and sociopolitical unrest in the northwest and southwest regions. These various crises were already severely affecting the country's economic situation, including the transport, hotel, telecommunications, and cash-farming sectors recording significant material and financial losses.

2 | THE COVID-19 PANDEMIC AND EMPLOYMENT: SOME STYLIZED FACTS

The Covid-19 pandemic is greatly affecting the employment situation in firms of all branches (as well of all sizes) in Cameroon. The survey carried out by GICAM (Groupement Inter-patronal du Cameroun) between April and May 2020 on a sample of 250 firms, shows that the impact of the Covid-19 pandemic has worsened for 61.5% of firms and

[1]The drop in prices for oil is a big fiscal shock for net oil exporters. Conversely, oil importers will see considerable savings in their import bills from the lower price.

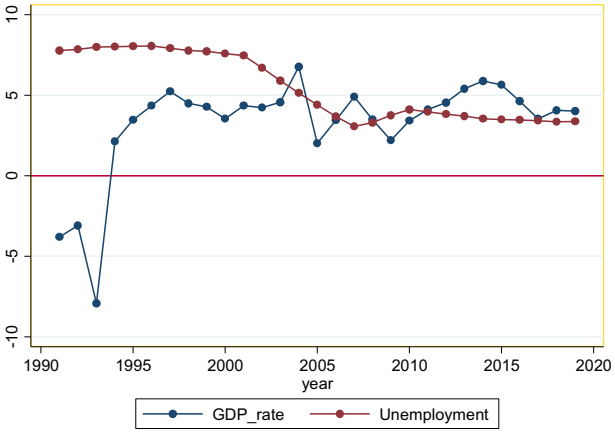

FIGURE 1 GDP rate and unemployment paths in Cameroon. *Note*: This figure presents the historical data of the gross domestic product (GDP) rate and the estimates of unemployment in Cameroon.*Source*: Author, using data from the World Bank and ILO (2020)

weakened for 10.8% of them. GICAM estimates a 31% drop in turnover for firms severely impacted by the Covid-19 crisis in April 2020 compared to April 2019, that is losses of around 310.1 billion FCFA.[2]

Regardless of the firm size, the most affected branches of activity are accommodation and food services (88.9%), food industries (80.0%), financial services and insurance (71.4%), and ICT (70.0%). With this pandemic, the great majority of firms have been forced, To avoid total bankruptcy, to resort to: (i) the reduction of working hours; (ii) the layoff of certain employees; (iii) reduction of salaries; (iv) cancellation of supplier orders; (v) postponement of planned investments. The direct consequence of these measures is the acceleration of national unemployment, in addition to underemployment. This is particularly important for female workers called to take care of children staying home; studies show that the exclusion of women in employment has a negative impact on both sustainable growth and poverty reduction (Anyanwu & Augustine, 2013; Elu & Price, 2017).

In fact, GICAM estimates that more than 42.6% of firms have had to make layoffs and 12.4% of firms have had to resort to dismissals of their permanent staff. In the sector most affected, hotels and restaurants, these rates are over 90% of firms. According to the size of enterprises, 54.3% of small enterprises and 47.5% of medium enterprises in Cameroon proceeded to make layoffs. In May 2020 in Cameroon, 53,346 permanent employees were technically unemployed (13.6% of the total permanent employees of modern firms) and 13,834 permanent employees were made redundant due to the crisis (3.5% of the workforce). Indeed, the Covid-19 pandemic will dramatically increase the level of unemployment in Cameroon, which was already exacerbated by conventional determinants enumerated in the study by Njifen (2015).

3 | REVIEW OF THE EXISTING EMPIRICAL STUDIES

This section relates to the fast-growing literature studying the economic consequences of the Covid-19 pandemic from April to August 2020. Coibion et al. (2020), analyze the effects of the Covid-19 pandemic on the labor market in the Nielsen Homescan. Using a large-scale survey of a panel of households, they find job loss estimated at 20 million on April 8, far more than jobs lost over the entire Great Recession. Then, they estimate the unemployment rate at 2%, which is surprisingly small. In fact, workers who lost their jobs are not actively looking for new ones.

The distributional consequences of the Covid-19 pandemic's impacts using CPS data on stocks and flows of employment are examined in Cortes and Forsythe (2020), which first shows that inequalities have extremely increased over the corresponding period. They estimate a series of regressions using data at the group level (with regard to occupations, industries, or demographic categories) for each month from January 2015 to April 2020. Results suggest amazing job loss, larger in lower-paying occupations and industries. Alon et al. (2020), focus on gender equality to examine the Covid-19 impacts both during the downturn and the subsequent recovery period. As a result, employment loss related to social distancing measures has affected sectors with high female employment shares than their peers. In addition, closures of schools and daycare centers have put unprecedented pressure on working mothers.

[2]This figure corresponds to nearly 51.5 billion FCFA in tax revenue and social contributions less from these firms to the government's budget (GICAM, 2020).

In the US labor market, one of the most affected places after Brazil, Montenovo et al. (2020) examine the determinants of job loss due to Covid-19. They find that employment losses are larger in three specific groups: the Hispanics; workers aged between 20 and 24 years old; and those with high school degrees. Also, findings suggest a large share of unemployment gaps for key racial, ethnic, age, and education subpopulations. Furthermore, having immigrant status becomes extremely difficult at this time. Borjas and Cassidy (2020) look at the impacts of Covid-19 labor market shock on immigrant jobs. With CPS data, results reported a severe decline in employment for immigrants, and immigrants had lower employment rates than natives.

To the best of my knowledge, no single study has yet been conducted in the case of Cameroon. This is particularly due to the availability of data. So, this paper uses the most recent data collected by the INS to examine the adverse effects of the Covid-19 pandemic on Cameroon's labor market.

4 | METHODOLOGY

This section first presents the survey that helped to collect data and variables used for the analysis (Section 4.1), and the method applied to address the objective (Section 4.2).

4.1 | Data source and variables

The data used in this study come from a rapid survey conducted by the INS, between April and May 2020. The survey was carried out remotely through the technological tools of communication, with a sample of 1,310 households, a representative sample of the national economy and the geographical coverage. The variables used to capture the employment situation during this crisis period are: (i) wage cut, a binary variable which takes the value 1 when the worker suffers from a reduction in wages during this period and 0 otherwise; (ii) temporary suspension of work, a binary variable takes the value 1 if the respondent has been temporarily suspended from work and 0 otherwise; and (iii) job loss, a binary variable which takes the value 1 if the respondent has lost their job permanently and 0 otherwise.

We identify a number of factors following the short recent literature on Covid-19 impacts (Borjas & Cassidy, 2020; Montenovo et al., 2020), in which we add other control variables related to this specific context.

- To have difficulties to get cleaning products (*cleaning_products_input*), categorical variable where 1 = Yes, the respondent faces difficulties, 2 = No and 3 = the respondent is not concerned. Indeed, difficulties encountered by workers in obtaining cleaning products (self-provision or from the company) will slow their productivity and hence their wages or question the importance of the post.
- To have difficulties to get access to transport services (*transport_services*), categorical variable where 1 = Yes, the respondent faces difficulties, 2 = No, and 3 = the respondent is not concerned.
- Lower outgoing for work (*lower_outgoing*), categorical variable where 1 = Yes, the respondent reduces the frequency of going out for work, 2 = No, and 3 = the respondent is not concerned.
- Production slowdown (*slowdow_production*), categorical variable where 1 = Yes, the respondent faces a slowdown of the production, 2 = No, and 3 = the respondent is not concerned.
- Closure of activities (*closure_activty*), categorical variable where 1 = Yes, the respondent faces a partial (or total) closure of activities, 2 = No, and 3 = the respondent is not concerned.
- Input shortages (*input_shortage*), categorical variable where 1 = Yes, the respondent faces difficulties, 2 = No and 3 = the respondent is not concerned.
- To have difficulties to see a doctor for any health problem (*see_doctor*), categorical variable where 1 = Yes, the respondent faces difficulties, 2 = No and 3 = the respondent is not concerned. According to Sahn (2012), individuals' good health conditions their current productivity and that of future generations. In other words, being unhealthy will negatively affect an individual's work as well as their family welfare.
- Loss of customer trust (*loss_customer_trust*), categorical variable where 1 = Yes, the respondent losses customer trust, 2 = No, and 3 = the respondent is not concerned.
- Increased uncertainties (*increased_uncertainties*), categorical variable where 1 = Yes, 2 = No, and 3 = the respondent is not concerned.

- Age sub-groups (*age_group*), categorical variable where 1 = the active population aged 15–34 years, 2 = the active population aged 35–54, and 3 = the active population aged 55 and more.
- Sector of activity (*sector*), categorical variable where 1 = the respondent works in a public firm, 2 = the respondent works in a private firm excluding agriculture, and 3 = the respondent works in a private firm based in agriculture.

4.2 | Method

The analytical approach was carried out at two levels: an interpretation based solely on descriptive statistics of the variables and a second analysis which concerns the determinants of the employment situation during this period of sanitarian crisis. This section describes the method used in the analysis of determinants.

Three main items of employment are considered in this study, all of which are binary variables[3]: wage cuts, temporary job suspension and job loss.

Consider y^* as the underlying latent propensity that $y = 1$. For the binary variable wage cut (or no wage cut), y^* is the propensity for a wage cut. This also applies to the binary variables temporary job suspension and job loss. So, the equation of the binary outcome model is written as follows:

$$y_k^* = \alpha + \beta x + \varepsilon \tag{1}$$

$$y_{ki} = \begin{cases} 1 & if\ the\ the\ i^{th}\ respondent\ experienced\ y_k^* \\ 0 & otherwise. \end{cases}, k = 1...3 \tag{2}$$

As far as y_k^* is unobserved, the distribution of the error term (ε) is unknown. To estimate the model using the maximum likelihood estimation technique, we need to make some assumptions concerning the distribution of the errors.

As y_k^* is realized with the probability π_i, the error term can follow a normal distribution $\varphi^{-1}(\pi_i) = \sum_{p=0}\beta_p x_{ip}$, that is, a "probit model." Or, the error term follows a standard logistic distribution $\ln\left(\pi_i/1-\pi_i\right) = \sum_{p=0}\beta_p x_{ip}$, that is, a "logit model." The preference to choose one over the other depends on the scholar because the results tend to be very similar. So, the log-likelihood function is written as: $\log L(\beta) = \sum\left\{y_i \log(\pi_i) + (n_i - y_i)\log(1-\pi_i)\right\}$. And π_i depends on the covariates x_i and a vector of p parameters β through the logit model.

Let us write the variables in Equation (1) to have the following empirical models:

$$\begin{aligned} wage\_cut_i = {} & \alpha_0 + \beta_1 cleaning\_products\_input_i + \beta_2 see\_doctor_i + \beta_3 transport\_services_i + \beta_4 lower\_outgoing_i \\ & + \beta_5 slowdow\_production_i + \beta_6 closure\_activty_i + \beta_7 input\_shortage_i + \beta_8 loss\_customer\_trust_i \\ & + \beta_9 increased\_uncertainties_i + \epsilon_i \end{aligned} \tag{3}$$

$$\begin{aligned} temporary\_job\_suspension_i = {} & \alpha_0 + \beta_1 cleaning\_products\_input_i + \beta_2 see\_doctor_i + \beta_3 transport\_services_i \\ & + \beta_4 lower\_outgoing_i + \beta_5 slowdow\_production_i + \beta_6 closure\_activty_i \\ & + \beta_7 input\_shortage_i + \beta_8 loss\_customer\_trust_i + \beta_9 increased\_uncertainties_i + \epsilon_i \end{aligned} \tag{4}$$

$$\begin{aligned} job\_loss_i = {} & \alpha_0 + \beta_1 cleaning\_products\_input_i + \beta_2 see\_doctor_i + \beta_3 transport\_services_i + \beta_4 lower\_outgoing_i \\ & + \beta_5 slowdow\_production_i + \beta_6 closure\_activty_i + \beta_7 input\_shortage_i + \beta_8 loss\_customer\_trust_i \\ & + \beta_9 increased\_uncertainties_i + \epsilon_i \end{aligned} \tag{5}$$

Each equation is estimated with one of the three outcomes considered in the labor market. Most of the independent variables have three levels (1 = yes, have difficulties, 2 = no, and 3 = not concerned) as defined in Table 1, but the results will be sorted with the first level (1 = yes) as the reference. For more information on the coefficients of others levels, kindly refer to the Appendix.

[3]Referring to the rapid survey questionnaire.

TABLE 1 Descriptive statistics of variables used

Variable	Obs	Code	Frequency	%
Wage cut	941	0 = No	300	31.88
		1 = Yes	641	68.12
Temporary job suspension	940	0 = No	643	68.4
		1 = Yes	297	31.6
Job loss	817	0 = No	756	92.53
		1 = Yes	61	7.47
Difficulties to get cleaning products	1,307	1 = Yes, have difficulties	462	35.35
		2 = No	831	63.58
		3 = Not concerned	14	1.07
Difficulties to see doctor	1,307	1 = Yes, have difficulties	288	22.04
		2 = No	981	75.06
		3 = Not concerned	38	2.91
Difficulties to have transport services	1,307	1 = Yes, have difficulties	206	15.76
		2 = No	819	62.66
		3 = Not concerned	282	21.58
Lower outgoing for work	1,307	1 = Yes	806	61.67
		2 = No	450	34.43
		3 = Not concerned	51	3.9
Production slowdown	1,019	1 = Yes	77.82	77.82
		2 = No	209	20.51
		3 = Not concerned	17	1.67
Closure of activities	903	1 = Yes	123	13.62
		2 = No	684	75.75
		3 = Not concerned	96	10.63
Input shortages	814	1 = Yes	189	23.22
		2 = No	532	65.36
		3 = Not concerned	93	11.43
Loss of customer trust	820	1 = Yes	28.78	28.78
		2 = No	488	59.51
		3 = Not concerned	96	11.71
Increased uncertainties	729	1 = Yes	284	38.96
		2 = No	296	40.6
		3 = Not concerned	149	20.44
Age sub-groups	836	1 = 15–34	147	17.58
		2 = 35–54	542	64.83
		3 = 55 and more	147	17.58
Sector	1,105	1 = Public	11.31	11.31
		2 = Private	668	60.45
		3 = Private in agriculture	312	28.24

Source: Author calculations, using INS survey (May 2020).

5 | RESULTS AND DISCUSSIONS

This section starts with a discussion of descriptive statistics (Section 5.1). Then follows a presentation of the results on the determinants of the adverse impact of the Covid-19 pandemic on employment (Section 5.2), and the process for heterogeneity correction (Section 5.3).

5.1 | Descriptive results

Descriptive statistics on the variables are presented in Table 1. Regarding the characteristics of the people surveyed (1,310 in total), the majority are made up of men 759 (58%) and 551 women (42%). The respondents are aged 15 or over, the youngest (15–34 years old) and the oldest (55 years old and over) have the lowest representation, that is 17.58% each. The best-represented subpopulation is that of adults (35–54 years), which corresponds to the working age group in Cameroon. The respondents work mainly in the private sector (60.45%), private agricultural enterprises (28.24%) and public enterprises (11.31%). Among these workers, it is important to note that compensation on profit is the most common form of remuneration (i.e. 50%), followed by salaried workers (30%) and those paid by task (15%) (Figure 2).

The variables indicating the employment situation, for this period of the Covid-19 pandemic, identified here are: reduction of wages, temporary job suspension and job loss. In our sample, more than 60.93% suffered a wage cut, 31.6% lost their job temporarily and 7.47% lost their job permanently during this period. In other words, more than half of workers have suffered a drastic reduction in their wages, which as a direct consequence, led to the fall in national demand. This drop in demand risks driving all economic activity down, without government intervention.

Indeed, with the outbreak of this Covid-19 epidemic, 62% of the respondents significantly reduced the frequency of outgoings for work (Figure 3). The main mode of transmission of the virus is through contact with people. During this Covid-19 crisis, 35.35% of people had difficulty obtaining cleaning products, 22% had difficulty seeing a doctor for consultation and 15.76% had difficulty getting around via public transport. In their respective activity, 77.82% of the respondents experienced a slowdown in production, shutdown activities (13.62%), failures in the supply of inputs (23.22%), loss of confidence of their client (28.78%), and the increase in uncertainties (38.96%).

5.2 | Results on the determinants of the adverse effects of Covid-19 on employment

Workers were severely affected at three levels: (i) wages cuts; (ii) temporary job suspension; and (iii) job loss. These main variables are regressed on a number of factors using a logit model, due to the dichotomous nature of the dependent variables. The regression of the three empirical equations (3–5) are presented in result tables and control variables are added successively according to the models (1–6).

We observe that the variables (Table 2) slowdown in production, the lack of inputs and the increase in uncertainties negatively and significantly affect the wage cuts (Models 1 and 2). The reduction in the frequency of outings for work, the slowing down of production activity and the stopping of activities have a negative and significant impact on the temporary suspension of work (Models 3 and 4). Likewise, the variables reduction of exit frequencies and cessation of activities have a negative and significant effect on job loss (Models 5 and 6). To better appreciate the robustness of our results, we took into account potential heterogeneity problems that may exist in our sample. Particularly at the level of the different sectors of activity and of the age groups of the population, the new results are discussed in the following subsection.

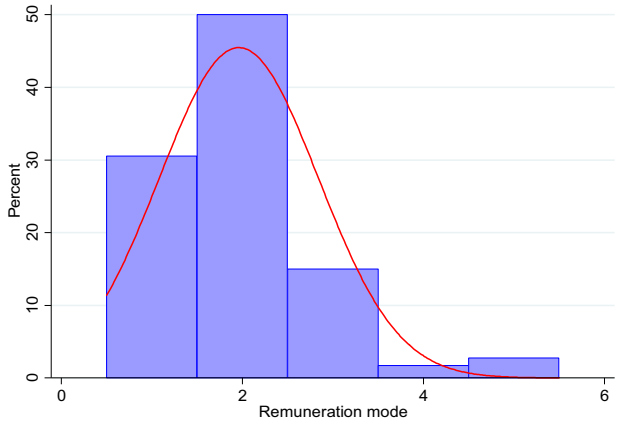

FIGURE 2 Respondents' remuneration mode.*Source*: Author, using survey from the National Institute of Statistics (INS, 2020)

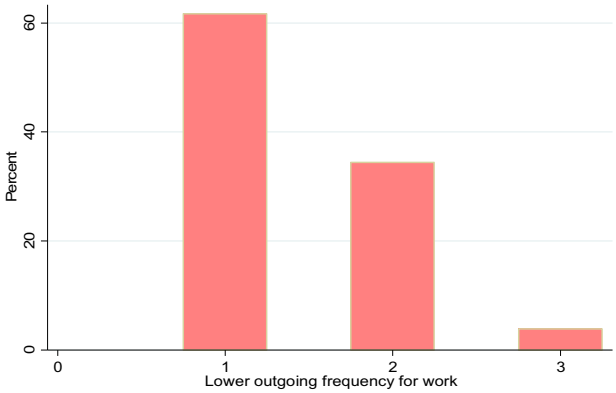

FIGURE 3 Lower frequency of going out for work of households.*Source*: Survey from the National Institute of Statistics (INS, 2020)

5.3 | Correction of heterogeneity

In this study, the existence of potential heterogeneity problems that can bias the results is considered at two levels: (i) the sector of activity, according to the respondents working in public firms, private firms in agriculture and out of agriculture (Djoumessi et al., 2020); (ii) the age groups, following the youth group (15–34 years old),

TABLE 2 Results of the determinants of Covid-19 consequences

Variables	(1) *wage_cut*	(2) *wage_cut*	(3) *temporary_job_suspension*	(4) *temporary_job_suspension*	(5) *job_loss*	(6) *job_loss*
cleaning_products_input	−0.329*	0.242	0.00174	0.0594	−0.447	0.372
	(0.197)	(0.374)	(0.179)	(0.440)	(0.317)	(0.570)
see_doctor	−0.141	−0.776*	−0.266	−0.663	−0.00409	1.476*
	(0.223)	(0.462)	(0.197)	(0.557)	(0.339)	(0.889)
transport_services	0.209	0.662*	0.128	0.396	−0.336	−0.362
	(0.159)	(0.374)	(0.142)	(0.340)	(0.268)	(0.545)
lower_outgoing	0.00245	−0.335	−1.212***	−1.035**	−0.911**	−1.434**
	(0.192)	(0.369)	(0.234)	(0.431)	(0.389)	(0.610)
slowdow_production	−3.678***	−3.382***	−2.922***	−3.433***		
	(0.285)	(0.442)	(0.469)	(1.057)		
closure_activty		−0.578		−3.103***		−3.424***
		(0.447)		(0.695)		(1.017)
input_shortage		−1.132***		0.621		0.275
		(0.357)		(0.498)		(0.813)
loss_customer_trust		0.457		0.0926		−0.304
		(0.413)		(0.700)		(1.697)
increased_uncertainties		−1.037***		−0.153		0.0847
		(0.328)		(0.569)		(1.237)
Constant	5.684***	9.057***	4.368***	9.220***	0.0791	−1.283
	(0.586)	(1.441)	(0.590)	(1.403)	(0.700)	(1.957)
Wald χ^2	202.88***	105.95***	91.64***	79.99***	14.95**	28.08***
Pseudo R^2	0.3149	0.4218	0.1815	0.4109	0.390	0.3002
Observations	882	303	807	314	817	190

Notes: Robust standard errors in parentheses, ***$p < .01$, **$p < .05$, *$p < .1$. Models 1 and 2 represent the regressions on wage cut. Models 3 and 4, the regressions on temporary suspended work. The last models, 5 and 6, the regressions on job loss in the labor market.

Source: Author calculations, using INS survey (May 2020).

TABLE 3 Results of Covid-19 impacts for public firms

Variables	(1) *wage_cut*	(2) *wage_cut*	(3) *temporary_job_suspension*	(4) *temporary_job_suspension*	(5) *job_loss*	(6) *job_loss*
cleaning_products_input	−1.163**	−0.707	0.301	−0.206	−1.630	−0.604
	(0.563)	(0.966)	(0.509)	(1.082)	(1.322)	(1.795)
see_doctor	1.139*	1.203	0.572	0.147	−0.453	−2.070
	(0.669)	(1.432)	(0.594)	(1.236)	(1.325)	(1.994)
transport_services	−0.0191	−1.211	−0.394	0.756	1.196	0.909
	(0.476)	(1.027)	(0.458)	(0.953)	(0.922)	(1.276)
lower_outgoing	−1.806**	−1.759	−3.202***		0.331	
	(0.783)	(1.202)	(1.050)		(1.296)	
closure_activty		0.101		−1.573		−3.036*
		(1.114)		(1.257)		(1.722)
loss_customer_trust		17.96		−1.164		
		(3,041)		(1.552)		
increased_uncertainties		−17.73		0.114		
		(3,041)		(1.357)		
lower_outgoing				-		
Constant	0.871	2.064	2.347	3.596	−3.126	4.172
	(1.497)	(4.496)	(1.608)	(4.499)	(3.432)	(4.263)
Wald χ^2	13.77**	14.25**	22.68***	6.37	3.67	4.15
Pseudo R^2	0.1212	0.2870	0.1686	0.1531	0.2092	0.2212
Observations	102	39	103	30	94	81

Notes: Robust standard errors in parentheses, ***$p < .01$, **$p < .05$, *$p < .1$. Models 1 and 2 represent the regressions on wage cut. Models 3 and 4, the regressions on temporary suspended work. The last models, 5 and 6, the regressions on job loss in the labor market.

Source: Author calculations, using INS survey (May 2020).

TABLE 4 Results of Covid-19 impacts for private firms out of agriculture

Variables	(1) *wage_cut*	(2) *wage_cut*	(3) *temporary_job_suspension*	(4) *temporary_job_suspension*	(5) *job_loss*	(6) *job_loss*
cleaning_products_input	−0.527*	−0.587	−0.249	0.245	−0.451	0.432
	(0.272)	(0.491)	(0.221)	(0.516)	(0.377)	(0.715)
see_doctor	−0.183	0.510	−0.501*	−0.724	0.0786	0.687
	(0.325)	(0.603)	(0.256)	(0.615)	(0.459)	(0.826)
transport_services	−0.290	−0.750**	0.0909	0.676*	−0.407	0.126
	(0.207)	(0.382)	(0.174)	(0.376)	(0.318)	(0.574)
lower_outgoing	−0.747***	−1.665***	−1.752***	−1.273***	−1.137**	0.675
	(0.222)	(0.426)	(0.249)	(0.455)	(0.451)	(0.647)
closure_activty		−1.034*		−4.189***		−3.356***
		(0.595)		(0.675)		(0.760)
loss_customer_trust		−1.564***		0.192		−1.133
		(0.481)		(0.471)		(0.790)
increased_uncertainties		−0.224		−0.133		0.352
		(0.353)		(0.373)		(0.697)

(Continues)

TABLE 4 (Continued)

Variables	(1) *wage_cut*	(2) *wage_cut*	(3) *temporary_job_suspension*	(4) *temporary_job_suspension*	(5) *job_loss*	(6) *job_loss*
Constant	4.431***	10.16***	2.876***	7.976***	0.576	1.286
	(0.794)	(1.882)	(0.610)	(1.591)	(1.005)	(1.594)
Wald χ^2	20.36***	54.53***	77.41***	117.7***	13.32**	30.1***
Pseudo R^2	0.0431	0.2574	0.1234	0.4237	0.0525	0.2746
Observations	511	185	474	212	412	187

Notes: Robust standard errors in parentheses, ***$p < .01$, **$p < .05$, *$p < .1$. Models 1 and 2 represent the regressions on wage cut. Models 3 and 4, the regressions on temporary suspended work. The last models, 5 and 6, the regressions on job loss in the labor market.

Source: Author calculations, using INS survey (May 2020).

and the adult group (35–54 years old). With regard to sector, the results show that the log of the odds for public firms are very often lower than private firms (in or out of agriculture) for all determinants. The log of odds for private firms in agriculture and out of agriculture are mitigated. This translates the fact the consequences of Covid-19 are more pronounced in the private sector, which did not take advantage of government support or is still waiting for it. Then with age groups, the log of odds for the adult group is very often greater than the youth group for all determinants. This translates that adults are more affected than youths during this outbreak of the Covid-19 pandemic.

Specifically, for the active population of the public sector (Table 3), the reduction in the frequency of exits for work has a negative and significant effect on the fall in wages (Model 1) and on the temporary suspension of jobs (Model 3). Closing

TABLE 5 Results of Covid-19 impacts for private firms in agriculture

Variables	(1) *wage_cut*	(2) *wage_cut*	(3) *temporary_job_suspension*	(4) *temporary_job_suspension*	(5) *job_loss*	(6) *job_loss*
cleaning_products_input	−0.654**	−0.318	−0.0793	0.0194	1.239	2.499
	(0.331)	(0.513)	(0.429)	(0.716)	(1.017)	(3.595)
see_doctor	−0.778**	−1.647***	−0.745*	−0.581	−0.508	2.199
	(0.327)	(0.564)	(0.417)	(0.733)	(0.894)	(1.833)
transport_services	0.330	0.403	−0.131	−0.594	−0.816	
	(0.257)	(0.412)	(0.338)	(0.568)	(0.728)	
lower_outgoing	−1.623***	−1.334**	−1.348***	−1.113	−0.778	
	(0.315)	(0.520)	(0.430)	(0.713)	(0.853)	
closure_activty		1.400		−0.856		−4.967**
		(1.050)		(1.184)		(2.194)
loss_customer_trust		−1.686**		−0.992		
		(0.803)		(0.795)		
increased_uncertainties		−0.772		0.338		−2.286
		(0.528)		(0.557)		(1.792)
Constant	4.314***	6.179**	1.686	4.335	−2.051	−0.561
	(0.881)	(2.543)	(1.037)	(2.931)	(2.180)	(8.101)
Wald χ^2	47.72***	37.51***	18.44***	9.25	3.69	15.38**
Pseudo R^2	0.1669	0.2616	0.0929	0.1173	0.0596	0.5462
Observations	207	105	249	124	219	122

Notes: Robust standard errors in parentheses, ***$p < .01$, **$p < .05$, *$p < .1$. Models 1 and 2 represent the regressions on wage cut. Models 3 and 4, the regressions on temporary suspended work. The last models, 5 and 6, the regressions on job loss in the labor market.

Source: Author calculations, using INS survey (May 2020).

TABLE 6 Results of Covid-19 impacts for the youngest sub-group (15–34 years old)

Variables	(1) *wage_cut*	(2) *wage_cut*	(3) *temporary_job_suspension*	(4) *temporary_job_suspension*	(5) *job_loss*	(6) *job_loss*
cleaning_products_input	−0.974*	−0.845	−0.531	−2.290	−1.036	16.04
	(0.566)	(1.660)	(0.500)	(1.649)	(0.830)	(6,002)
see_doctor	−0.432	−0.0824	−0.266	−3.196**	0.00192	−0.908
	(0.575)	(1.180)	(0.550)	(1.442)	(0.982)	(1.895)
transport_services	0.124	−0.656	−0.502	−0.676	−1.152	
	(0.415)	(0.840)	(0.429)	(1.241)	(0.951)	
lower_outgoing	−1.680***	−3.044***	−1.083**	−1.819		
	(0.440)	(1.030)	(0.501)	(1.394)		
closure_activty		1.063		−4.221		−16.95
		(2.292)		(3.224)		(6,002)
loss_customer_trust		−2.799		3.530*		
		(2.224)		(1.849)		
increased_uncertainties		−1.533*		−3.388**		
		(0.868)		(1.339)		
Constant	5.395***	14.01**	3.055**	19.47**	2.531	2.270
	(1.552)	(6.592)	(1.443)	(9.344)	(2.626)	(4.017)
Wald χ^2	23.99***	25.85***	10.73*	26.79***	4.53	1.33
Pseudo R^2	0.1846	0.4422	0.0888	0.5506	0.0977	0.1592
Observations	104	43	98	47	48	7

Notes: Robust standard errors in parentheses, ***$p < .01$, **$p < .05$, *$p < .1$. Models 1 and 2 represent the regressions on wage cut. Model 3 and 4, the regressions on temporary suspended work. The last models, 5 and 6, the regressions on job loss in the labor market.

Source: Author calculations, using INS survey (May 2020).

TABLE 7 Results of Covid-19 impacts for the adults sub-group (35–54 years old)

Variables	(1) *wage_cut*	(2) *wage_cut*	(3) *temporary_job_suspension*	(4) *temporary_job_suspension*	(5) *job_loss*	(6) *job_loss*
cleaning_products_input	−0.684***	−0.108	−0.214	0.783	−0.905*	−0.389
	(0.246)	(0.428)	(0.268)	(0.584)	(0.500)	(1.091)
see_doctor	−0.355	−0.564	−0.492*	−0.498	0.0833	0.581
	(0.259)	(0.452)	(0.281)	(0.600)	(0.533)	(1.256)
transport_services	0.180	0.308	0.0424	0.00116	−0.527	−1.143
	(0.183)	(0.329)	(0.199)	(0.399)	(0.373)	(1.031)
lower_outgoing	−0.543**	−0.413	−1.678***	−1.671***	−0.622	2.083
	(0.212)	(0.379)	(0.283)	(0.517)	(0.487)	(1.239)
closure_activty		−0.813		−2.806***		−3.576***
		(0.508)		(0.573)		(1.243)
loss_customer_trust		−1.027**		−0.208		−1.859
		(0.448)		(0.536)		(1.357)
increased_uncertainties		−0.260		−0.946**		−1.625
		(0.354)		(0.464)		(1.735)

(Continues)

TABLE 7 (Continued)

Variables	(1) *wage_cut*	(2) *wage_cut*	(3) *temporary_job_suspension*	(4) *temporary_job_suspension*	(5) *job_loss*	(6) *job_loss*
Constant	2.865***	5.273***	2.557***	7.863***	0.558	6.550**
	(0.641)	(1.405)	(0.679)	(1.643)	(1.099)	(2.619)
Wald χ^2	21.49***	25.81***	53.44***	69.92***	9.97*	41.24***
Pseudo R^2	0.0424	0.1228	0.1106	0.3317	0.0593	0.5541
Observations	400	155	386	172	339	157

Notes: Robust standard errors in parentheses, ***$p < .01$, **$p < .05$, *$p < .1$. Models 1 and 2 represent the regressions on wage cut. Models 3 and 4, the regressions on temporary suspended work. The last models, 5 and 6, the regressions on job loss in the labor market.

Source: Author calculations, using INS survey (May 2020).

activities has a negative and significant effect on job loss (Model 6). Then, for people working in private firms out of agriculture (Table 4), difficulties in accessing transport services, declining frequency of exits for work, closure of activities and loss of customer confidence have a negative and significant effect on reducing wages (Models 1 and 2). These same variables, excluding the loss of customer confidence, have a negative and significant effect on temporary job suspension (Models 3 and 4). Only the variables reduction of the frequency of exits and closure of activities have a negative and positive effect on the permanent loss of job (Models 5 and 6). Finally, for workers in private agricultural enterprises (Table 5), we observe that the difficulties of access to cleaning products, to see a doctor in consultation, the decrease in the frequency of outings for work and the loss of customer confidence have a negative and significant effect on the reduction of wages (Models 1 and 2). Second, the difficulties in seeing a doctor and the low frequency of outings have a negative and significant effect on the temporary suspension from work (Model 3). Only the variable cessation of activities, has a negative and significant effect on job loss.

Depending on the age groups, the active population of the youngest (Table 6), the reduction in the frequency of exits to work and the increase in uncertainties have a negative and significant effect on both the fall in wages and temporary job suspension for this population group (Models 1–4). No significant effect is observed for job loss. For the adults' group (Table 7), the difficulties in accessing cleaning products, the decrease in the frequency of exits to work, and the loss of customer confidence have a negative and significant effect on the reduction in wages (Models 1 and 2). The decrease in the frequency of outgoings to work, the closure of activities and the increase in uncertainties have a negative and significant effect on the temporary suspension of job (Models 3 and 4). And finally, the closure of activities has a negative and significant effect on the loss of employment. For the third population group (i.e. the oldest, 55 and over), we do not have enough observations.

6 | CONCLUSION

We provide an early assessment of the Covid-19 impacts on employment in Cameroon. We use data collected through a rapid survey led by the National Institute of Statistics, on 1,310 respondents from April to May 2020. First, the statistical results show that wage cuts touched 60.93% of the working population, the temporary work suspension affected 31.6% and a smaller proportion of workers (7.47%) suffered a permanent loss of their job. In other words, more than half of workers have suffered a drastic reduction in their wages, which has an adverse effect on national demand that might drive down the whole economic activity, without government (or external) intervention.

Then, the econometric results based on the logistic regression suggest that the slowdown in production, the breaks recorded in the supply of inputs, the difficulties of access to transport services, the reduction in the frequency of outgoings to work, the closure (total or partial) of activities and increased uncertainties have a negative and significant impact on labor market outcomes. By correcting any potential problem of heterogeneity existing at sectoral and age group level, the results broadly show that workers in private firms are more affected than their peers in public firms, and the middle-aged are the most affected group. Specifically, the reduction in the frequency of outgoings to work, the difficulties of access to transport services and the loss of customer confidence have a strong negative impact on both wage cuts and temporary work

suspension. And the closure (total or partial) of activities has a strong negative impact on the permanent loss of jobs during this period of the Covid-19 pandemic.

Recommendations are twofold: (i) to revamp the old methods of activity into a new digital innovation that allows less physical contact; and (ii) to find an appropriate way to support those who lost their jobs in the private firms, in particular, during this Covid-19 pandemic. Future research could stress more emphasis on the disproportionate Covid-19 impacts on female workers, who spend more time on childcare.

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APPENDIX

TABLE A1 Results of the determinants of Covid-19 consequences with other levels (2 = No, 3 = Not concerned)

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	***wage_cut***	***wage_cut***	***temporary_job_suspension***	***temporary_job_suspension***	***job_loss***	***job_loss***
cleaning_products_input						
2	−0.374	0.478	0.0914	0.0496	−0.500	0.600
	(0.237)	(0.387)	(0.197)	(0.535)	(0.327)	(0.744)
3	0.855	0.212	0.383		0.354	
see_doctor	(0.723)	(0.976)	(0.779)		(1.210)	
2	−0.0428	−0.707	−0.148	−0.344	0.0446	2.390
	(0.260)	(0.526)	(0.220)	(0.700)	(0.382)	(1.011)
3	−0.462	−0.830	−0.999		−0.0741	
transport_services	(0.674)	(0.861)	(0.819)		(1.263)	
2	0.0139	0.154	−0.379	2.433	−0.449	−0.949
	(0.298)	(0.639)	(0.259)	(0.928)	(0.421)	(0.886)
3	0.357	2.171	0.0819	0.526	−0.710	0.122
lower_outgoing	(0.340)	(0.829)	(0.290)	(0.860)	(0.512)	(0.950)
2	−0.0664	−0.231	−2.677***	−2.527***	−2.350***	0.632
	(0.215)	(0.382)	(0.234)	(0.557)	(0.396)	(0.892)
3	–	–	–	–	–	–
slowdow_production						
2	−6.654***	−6.391***	−5.837***	−6.276**		
	(0.289)	(0.477)	(0.467)	(1.273)		
3	–	–	–	–		–
closure_activty						
2		−2.068		−5.268***		−6.518***
		(0.841)		(0.929)		(0.932)
3		−2.511		−6.597***		−0.636
input_shortage		(1.143)		(1.248)		(1.259)
2		−2.284**		0.900		−2.719*
		(0.583)		(0.662)		(0.924)
3		−2.876**		0.450		0.508
loss_customer_trust		(0.737)		(0.884)		(1.145)
2		0.514		0.176		0.284
		(0.664)		(0.610)		(1.125)
3		0.183		0.140		
increased_uncertainties		(0.964)		(0.789)		
2		−2.527**		−1.993*		−0.531
		(0.598)		(0.592)		(1.187)
3		−2.861***		0.244		−4.482*
		(0.717)		(0.579)		(1.268)
Constant	1.842***	4.054***	0.359	2.938***	−1.517***	−0.719
	(0.292)	(0.956)	(0.248)	(0.871)	(0.311)	(0.968)
Wald χ^2	204.49***	99.58***	123.16***	90.69***	26.00**	33.27***
Pseudo R^2	0.3088	0.4351	0.2023	0.5356	0.613	0.4580
Observations	876	300	800	298	817	177

Notes: Robust standard errors in parentheses, ***$p < .01$, **$p < .05$, *$p < .1$. Models 1 and 2 represent the regressions on wage cut. Models 3 and 4, the regressions on temporary suspended work. The last models, 5 and 6, the regressions on job loss in the labor market.

Source: Author calculations, using INS survey (May 2020).