The Potential for Women and Youth Employment in Mali's Economic Sectors

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The Potential for Women and Youth Employment in Mali's Economic Sectors

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Executive summary

The study's main aim is to examine the sectors and the branches of activities within Mali's economy that have the highest job creation potential for women and the youth. To achieve this objective, the study is carried out following a methodology based on two approaches: qualitative and quantitative. The quantitative approach was based on a descriptive analysis of the main tendencies and on dispersion, while also being based on graphical analysis. Secondly, econometric estimations of a Cobb-Douglas production function were carried out in each branch of economic activity to determine their production potential and their related employment potential. Thereafter, a descriptive analysis of the employment potential allowed for the identification of the sectors of economic activity that have the highest employment creation potential for women and the youth. The qualitative analysis method of barriers to employment and work opportunities for women and youth in Mali as used is based on a framework proposed by Chakravarty et al. (2017). The method of content analysis is applied to data drawn on the literature from qualitative surveys undertaken on key informants.

The quantitative data used is essentially derived from the EMOP database (2013-2020), National Accounts (2012-2020), data from the World Bank (World Development Indicators) and the International Labour Organization database (ILOSTAT) (1990-2016). It covers three (3) economic sectors and 21 branches of activity. These quantitative data are complemented by data derived from the literature on qualitative surveys that were undertaken on key informants.

The descriptive results demonstrate that the unemployment phenomenon impacts more upon women and the youth aged between 15 and 35, illiterate people and people living in urban areas. However, vulnerable or precarious jobs are mostly undertaken by women, illiterate people and those living in rural areas. The inequalities regarding access to employment by women are present and persistent in all sectors of Mali's economy. However, these inequalities are more prevalent in the industrial sector than they are in the other sectors. When one considers the various branches of economic activity, one observes that inequality in access to employment has an impact, which is quite high, on women in 14 out of 21 sectors of economic activity in Mali. They have a high, or even very high, impact on the youth in 7 out of 21 branches of activity and definitely have an even higher impact upon young women than they do on young men.

An analysis of the barriers reveals that the difficulties faced by youth and women regarding access to jobs are a result of factors that are related both to labour supply

and demand. On the demand side, it is evident that access to finance, political instability, practices in the informal sector and access to electricity are the factors named as being the main barriers to investment by a relatively significant percentage of firms in the industrial and services sectors. Barriers to employment and work opportunities in firms have an indirect impact on their demand for labour, either by discouraging or encouraging their investment decision, and also their expansion. Regarding barriers to employment and work opportunities for women and the youth, such as is observed by labour suppliers and those that are responsible for formulating and/or implementing employment policies in Mali, and the civil society. The barriers are essentially technical, political, institutional, and economic in nature. The opportunities are such as the existence of youth employment programmes (PEJ) and the existence of investment partners for the training of women and youth to facilitate their socio-professional insertion. For example, there are training and insertion programmes for rural women, widows and descolarized young girls. There is also an institutional framework and instruments such as youth employment tax incentives and vocational training tax.

An examination of the results on employment potential demonstrates that 9 out of 13 branches in the examined sectors have an employment creation potential for women and youth aged between 15 and 35 years. However, the level of employment potential in various branches of activity differs according to the sector. It is relatively higher in the agricultural and trade sectors, but inexistent in the finance and insurance, information, and communication sectors, and in the public administration sector.

These results suggest that the effectiveness of employment policies for the employment of women and the youth in Mali could benefit from implementation of programmes and instruments based on the specificities of the sectors/branches of economic activity, regions, the type of actor and the nature of the barriers. Taking these specificities into account could contribute towards improving the professional insertion of women and the youth in Mali. More specifically:

- Public policies in Mali regarding the fight against inequalities in access to decent employment should be more targeted towards the youth aged between 15 and 35 years, women, particularly those who are illiterate, and are living in urban and rural areas.

- Policy interventions are required within all sectors of Mali's economy to achieve equality of access by women and youth to employment. Nevertheless, these public interventions could be more focused towards barriers related to the insertion of women into the industrial sector.

- In the short-term, the interventions in favour of equal access by women and the youth to employment could focus on reduction or eradication of barriers in 9 out of the 13 branches of economic activity. These branches of activity have an employment creation potential for women and youth aged between 15 and 35 years.

- In the medium and long-term, training policies and internship programmes could facilitate the insertion of women and youth into more productive areas of activity. These are notably such as finance and insurance, information and communication, and public administration sectors of activity.

- Measures aimed towards promoting investment and employment creation in the services sector could focus more on political stability, the fight against corruption, and unfair competition from informal enterprises. However, they could effectively promote investment opportunities and the creation of employment in the industrial sector by improving electricity supply. Furthermore, policies that facilitate ease of access to finance could be quite useful for the two economic sectors.

1. Introduction

Overview

Youth and women unemployment is a major challenge in most African countries. For example, in Sub-Saharan Africa, the unemployment rate of youth aged between 15 and 24 years is two times higher than that of adults, both for men and women (ILO, 2013). However, the phenomenon of youth unemployment in Africa has a higher impact on women than on men, at a rate of 1.26 times higher (World Bank, 2015). Furthermore, according to Elder and Kone (2014), the mean rate of under-utilization of labour among the youth is at 72.8% for women against 6.11% for men. Equally, of the few jobs that are available to the youth, most of them generate very little income (Chakravarty et al., 2017). In Mali, the phenomenon of unemployment has a higher impact upon the youth and women, especially those that live in urban areas. Also, precarious jobs are mostly held by women (55%), illiterate people (81%) and those living in rural areas (80%). Indeed, recent data for the Modular Permanent Household Survey (EMOP)[1] carried out by the National Institute of Statistics (INSTAT, 2019) indicates that the unemployment phenomenon in Mali is significantly higher in urban areas and mostly affects youth aged between 15 and 35 years, and women. For example, the unemployment rate of youth aged between 15 and 35 years was 20.2%. Women (6.1%) were more affected than men (4.9%). The rate was twice as high in urban areas (8.7%) than in rural areas (4.3%). It was more significant in the Gao region (30.5%), followed by Koulikoro (13.1%) and Kidal (10.7%). The lowest unemployment rates were observed in Mopti (4.1%), Kayes (2.4%), Sikasso and Ségou (2.1%) and Tombouctou (1.2%). The relatively low unemployment rate in Tombouctou, as compared to the higher rates in the southern regions, could partly be explained by: (i) the migration of several thousands of people from the North towards the South due to the insecurity that has been experienced in the North since 2012; (ii) an increase in development aid for the people in the Northern regions; and (iii) a high prevalence of vulnerable and precarious jobs in the South, where the majority of people rely on seasonal agricultural jobs.

The employment situation in Mali has significantly deteriorated since the advent in March 2020 of the first cases of Coronavirus (COVID-19) and the imposition of preventive measures in a context of political instability and growing and persistent insecurity. Due to the COVID-19 pandemic, more than 12% of the jobs that were previously available have been lost, a situation that has affected one out of every

six individuals (INSTAT, 2020). The rates stood at 16.1% in Bamako, against 11.4% in rural areas. However, youth unemployment in Mali remains a persistent problem due to several structural and conjunctural factors. Indeed, according to Mali's Youth Employment Agency (APEJ), problems related to youth unemployment arise from: (i) discordance between academic training and the demands of the labour market; (ii) low levels of qualification and professional experience; (iii) regional disparities in regard to underemployment; (iv) difficulties in access to financing for the youth; (v) low absorption capacities in the civil services and in the private sector. To these structural factors could be added several conjunctural factors. These include barriers related notably to labour supply and demand (Chakravarty et al., 2017). On the demand side, barriers to work opportunities are mostly the lack of access to finance, political instability, unfair competition from the informal sector, and lack of access to electricity (Bourdet, Dabitao and Dembélé, 2012; Traoré, 2005). Such factors are cited as the main barriers to investment by a significant number of firms in the industrial and services sectors (World Bank 2007; 2010; 2016). Barriers to work opportunities for firms have an indirect impact on their demand for labour, either by preventing or by favouring their investment decisions and their expansion. On the supply side, several barriers to work opportunities are cited in the literature (Bourdet, Dabitao and Dembélé, 2012; Chakravarty et al., 2017; Traoré et al., 2021) and by key informants. These factors are essentially of a technical, social, political, institutional, and economic nature.

Due to structural and conjunctural challenges, and with the aim of addressing the perennial problem of youth and women unemployment in Mali, and to avoid the potential problems[2], the Government of Mali has over the past two decades put in place several projects and actions using various policies and institutions. For example, in July 2009 and March 2015, the Government of Mali adopted the National Policy on Professional Training and the National Policy of Employment, and its Operational Action Plan (2015-2017). Regarding specific actions towards the promotion of women and gender equality, Mali has since 1993 put in place a commission that is dedicated to the advancement of women, under the leadership of a commissioner with the rank of minister. In 1997, Mali's government created a Ministry for the Advancement of Women, the Child, and the Family (MPFEF). The creation of this Ministry is an indication of Mali's political will implement the commitments undertaken during the Beijing conference and to prioritize gender equality. The mission of this Ministry was expanded to the formulation and implementation of a national policy on the advancement of the woman and was strengthened by the creation in 1999 of a National Directorate for the Advancement of Women. Since 1997, this Ministry has pursued the implementation of the First Action Plan for the advancement of Women. In 2002, it succeeded in formulating and facilitating a National Gender Policy, which was later adopted by the Cabinet of Ministers (in 2010).[3]

At the institutional and organizational level, several structures and institutions contribute to the implementation of Mali's National Policy on Youth Employment and Advancement of Women[4]. The implementation of programmes and specific actions dedicated to the promotion of equality between men and women was under

the purview of the Commission for the Advancement of Women in 1993 and MPFEF in 1997, respectively. The specific interventions for the employment of youth have essentially been implemented by APEJ, which is a public institution established under Act No. 031/AN-RM of 25th August 2003, modified under Act No. 2014-068/AN-RM of 31st December 2014. APEJ is placed under the authority of the Ministry for Employment and Vocational Training. At the national level, APEJ is represented through regional coordination in each of the nine (9) administrative regions of Mali and the District of Bamako. Its mission is to implement the National Youth Employment Programme (PEJ) to respond to the perennial problem of unemployed young graduates in Mali. It thus advocated for job creation for youth aged between 15 and 40 in rural and urban areas, notably by facilitating their access to formal labour markets, and to financing. Within the PEJ framework, APEJ has implemented several projects and actions such as the internship programme that was previously referred to as "Volontariat de l'APEJ". Since 2004, this programme has cost 12 billion FCFA and has benefitted 11 cohorts of young graduates in Mali, providing a total of 43,162 interns, of which 51% were women. Furthermore, APEJ has placed 1,1974 young graduates in work placement in private firms. These programmes have allowed more than 73% and 3% of the 19,736 young interns of the cohorts 7 to 10 to obtain either a job or an additional training programme, respectively (ONEF, 2021).

Notwithstanding these efforts in terms of the support of the employment of youth and the promotion of gender equality, youth unemployment and inequalities to the detriment of women remains a major challenge in Mali, and especially within a context of economic uncertainty and fragile security. Indeed, the chronic instability of Mali's political institutions combined with a fragile economic situation created an economic environment that was neither favourable towards the development of legal economic activities nor the creation of employment. For example, Mali is one of the thirteen (13) African countries classified as being in a situation of vulnerability at average intensity (World Bank, 2021). Since January 2012, the country has been experiencing an unprecedented situation - a political and security crisis that has progressively affected the Northern regions (Gao, Tombouctou, and Kidal) and those of the Centre or South (Mopti, Ségou and Sikasso). This situation of instability has been exacerbated by the emergence of the COVID-19 pandemic as from March 2020 and the two military coups that took place on 18th August 2020 and 24th May 2021. This uncertainty undoubtedly leads to a reduction in local and foreign investments in Mali, and thus hampers the development of any legal activity related to employment creation. The security, political and economic environment of a country plays a significant role in terms of investment decisions as investment flows into a country (World Bank, 2018; Bellak et al., 2008; Brenton and Di Mauro, 1999; and Demakas et al., 2007). For example, investment flows from a country are determined and influenced by factors such as political instability and security, the legal and regulatory environments, the size of the domestic market, stability of the domestic market, a resource of qualified labour, the state of infrastructure, the tax rate, the cost of labour and inputs, access to land and property, and financing from domestic markets (World Bank, 2021). All these

factors could act independently or in a collective manner to favour local or foreign investments, and through a boomerang effect, have an impact on the creation of jobs in favour of women and the youth.

Political instability combined with increasing insecurity, in addition to creating an uncertain economic environment, does not leave room in the short-term for an increase in investments in Mali, nor an improvement in the employment situations, more particularly regarding youth and women. It is important to note that most youth in Mali, particularly in the North and in the Centre, have been deprived of education since 2012. This could lead to an enhancement of the inequalities regarding access to employment to the detriment of the youth and women. To reduce such inequalities and to prevent their possible consequences (massive and irregular migration of youth, the enrolment of youth in armed terrorist groups, etc), the implementation of specific interventions that are likely to promote and maintain the employability of youth and women seems to be of paramount importance. This study therefore aims to provide policy makers with convincing data on employment of youth and women, through an examination of the sectors and branches of economic activity that have the highest potential for youth and women employment creation.

The rest of the report is divided into four sections. The first and the second describe the objectives and the methodology, respectively. The third section presents the results. The conclusion and the recommendations are provided in the last section.

Objectives

The main objective of this study is to examine the economic sectors and the branches of activity in Mali that have the highest potential for job creation for youth and women. More specifically, the study:

- Identifies economic sectors and branches of activity that are promising in terms of youth and women employment creation in Mali;

- Determine the specific conditions necessary to ensure that local and foreign firms in the private sector invest in these sectors and branches of activity in Mali;

- Identify the specific actors required to create conditions that would improve or reduce the security of investments in Mali; and

- Explore the means of advancing equality in access and opportunities for the youth and women to these new sources of labour and income, by reducing gender inequalities.

2. Methodology

This study is carried out following a methodology based on two approaches - quantitative and qualitative.

Quantitative approach

The quantitative approach is based, firstly on a descriptive analysis of the central tendency and dispersion, and on graphical analysis. This first part aims to identify the sectors and branches of economic activity that tend to employ the youth and women and to establish a profile of the unemployed. Secondly, econometric estimations of a Cobb-Douglas production function were undertaken to determine the production potential and the employment potential associated with each sector of economic activity. This microeconomic approach assumes that the employment potential of a given branches of activity is conditional to its current production, its technical efficiency, and to the current labour productivity in the branch of activities. Thus, based on this assumption, we could define the employment potential of each branch of economic activity through the relationship between its potential volume of production (maximal) and the labour productivity in the branch of activity. We use this method because it is best suited to the data that we have at our disposal, and it allows us to estimate the production potential and infer the employment potential adjusted to labour productivity.

Estimation of the production potential according to the branches of activity

The employment potential of a given sector of activity is theoretically defined as the relationship between the potential production volume (maximum) of the sector and labour productivity of the sector. Given that our main objective is to determine the branches of economic activity that have the highest potential for job creation, our approach consists in the first place of estimating the production potential according to the branches of economic activity. To do so, we adopt a specification used by Battese et al. (1992) and Wang et al. (2002) of a Stochastic frontier model of a Cobb-Douglas type production frontier. The empirical model is presented as follows:

$$Y_t^i = f(x_t^i, \beta) + \upsilon_t^i - \mu(z_t^i, \delta) \qquad (1)$$

Whereby Y_t^i is the production value evaluated according to the prices of production factors, x_t^i relates to the production factors that include capital stock (K_t^i) and the number of jobs (L_t^i) in each area of activity (i) over a period (t), z_t^i represents the set of explanatory factors of technical inefficiency of the branches of economic activities (i) over a period (t). It comprises variables such as the number of male employees, the number of female employees, the total number of employees in urban areas, the total number of employees in rural areas, the number of employees who are illiterate, the number of employees with a primary school level of education, the number of employees with a secondary school level of education and higher. $f(x_t^i, \beta)$ is the Cobb-Douglas structural production function. is the standard error term of a mean of zero and of a variance (σ_v^2). $\mu(.)$ is the function of technical inefficiency of exogenous variables z_t^i. This function could be specified through various functional forms such as exponential, normal, and semi-normal forms. For purposes of this study, we assume the use of a semi-normal form β and δ are the parameters to be estimated.

The production potential or maximum production ($Y_{max,t}^i$) of a given branches of economic activity is estimated through the use of parameters (β and δ) of the equation (1) and by allocating all the labour that is potentially available ($L_{max,t}^i$) in the sector. The potentially available labour corresponds to the sum of current jobs and the unemployed and the available manpower for the job among the unemployed. One could state that these workers are in active search of employment or are potentially available to work in the activity.

Estimation of employment potential by area of activity

The estimation of employment potential is given in Figure 1, which represents the production volume (y) of each branch of economic activity (i) as a function of labour L^i.

Figure 1: Relationship between production volume and labour volume
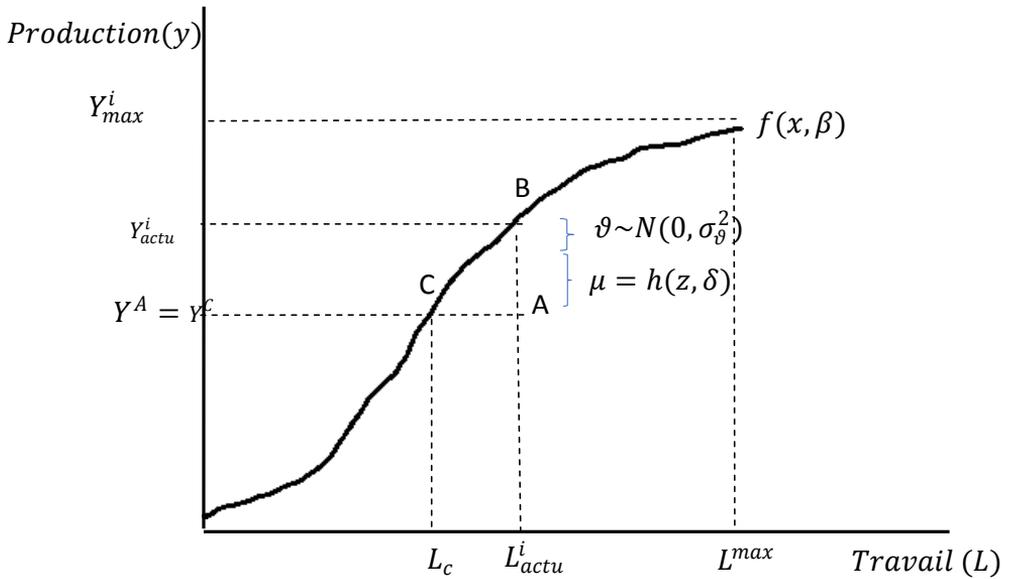
The employment potential that each branch of activity is likely to create is contingent upon its current production level (Y_{actu}^i), its current technical efficiency and the current labour productivity in the branch (PM_L^i). The expression of the employment potential adjusted to labour productivity is thus given in the following equation:

$$L_{\text{pot},t}^i = \frac{Y_{\max,t}^i}{PM_{L,t}^t} - \frac{Y_{actu}^i}{PM_{L,t}^t} = \frac{Y_{\max,t}^i}{PM_{L,t}^t} - L_{actu}^i \tag{2}$$

Whereby is the labour productivity in the branch of activity (i) over period (t). For purposes of this study, we assumed the level of productivity in the current period. This assumption is relatively true since the level of productivity varies in the short term.

L_{actu}^i is the current actual employment in the branch of activity (i). The condition that a branch of economic activity (i) should be considered as having the potential of employment creation is defined by $Y_{\max,t}^i - Y_{actu}^i > 0$, whereby Y_{actu}^i is the current production in that branches of economic activity (i).

When the current production volume of area branch of economic activity is lower than its estimated potential level (maximum), then the employment potential is positive. This signifies that the area of activity has a potential of job creation and is probably[5] so for women and youth. However, when the current volume of production in a branch of activity is higher than the estimated potential level, then the potential

of job creation will be negative in the short-term for that area of activity. This indicates that the area of activity is technically efficient. Nevertheless, in the medium and long-term, the potential volume of employment in each sector of activity will simply be equal to the number of people who have qualified for retirement, a factor that will not be evaluated within the framework of this study.

Potential employment per branch of activity

The distribution of the employment potential of each branch of economic activity according to the characteristics of sex and age group is determined by applying the

volume of employment potential (L^i_{pot}) estimated through the percentage mean of each characteristic. These percentage means are calculated according to the historical data base on employment in each branch of economic activity over a period covering 2013 to 2020. The data used is derived from EMOP/INSTAT. The calculations are done using Excel software.

Qualitative approach

This sub-section first presents the framework to be used to examine the barriers to employment and work opportunities for youth and women in Mali. Thereafter, a qualitative method of data analysis is described.

Analytical framework of the determinants of the employment of youth and women in Mali

The framework for the analysis of the barriers to employment and work opportunities for youth and women in Mali is derived from a model proposed by Chakravarty et al. (2017) that is illustrated in Figure 2. For purposes of this study, decisions to employ youth and women are limited to their endowment in key resources, such as competencies and time, and by preferences regarding the use of time, in regard to jobs, and providing a promising future. These endowments and preferences are themselves fashioned by contextual factors, notably the norms and social institutions that regulate the roles of youth and women within the household, the economy, and the society. The interaction between the endowments, the preferences and the contextual factors is dynamic, in the sense that changes in the distribution of endowments and of preferences could have a knock-on effect upon the norms and institutions, which then translates into a set of resources and constraints in constant evolution for youth and women.

Figure 2: **Analytical framework for the analysis of barriers to employment and work opportunities for youth and women**
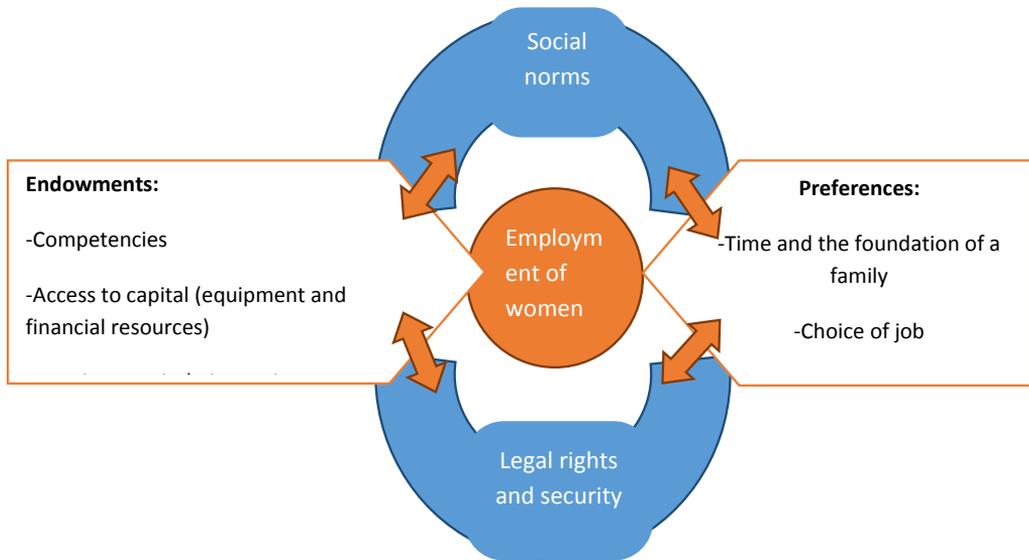
Source: Constructed from a framework based on Chakravarty et al. (2017)

Qualitative method of content analysis

The method of content analysis is applied to the data derived from the literature and the qualitative surveys undertaken on 9 key informants. The information gathered from key informants was transcribed literally and arranged according to key subject areas. After the transcription, the content was examined, and exhaustive and appropriate codes (attributes) were created to understand the various ideas proposed by the people that were interviewed regarding barriers to employment and work opportunities for women and the youth in Mali.

Sources of Quantitative and Qualitative Data

This study uses both quantitative and qualitative data. The quantitative data is mostly derived from the EMOP databases (2013-2020)[6], from National Accounts (2012-2020) from the World Bank (World Development Indicators, WDI) and from the International Labour Organization database (ILOSAT) (1990-2016). These data are complemented by qualitative data from interviews carried out on 9 categories of key informants, notably the heads of the institutions involved in the formulation and the implementation of Mali's national employment policy, heads of civil society organizations, religious and community leaders, regional organizations, and the managers of youth and women associations, etc. The data covers three sectors of economic activity and 21 branches of economic activity. The list of branches of economic activities is almost identical to that

of a typical international classification system, given per industry, for all the branches of economic activity (CITI, revision 4). The list of branches of economic activity is given in Annex 1. For each of the 21 branches of economic activity, information has been collected on various variables such as the production value and the volume of production factors, population, jobs, barriers to employment and work opportunities for women and youth, etc.

3. Results and discussion of results

This section presents the results from the quantitative and qualitative analysis of secondary data from various sources, and primary data collected during individual interviews and Focus Group Discussions (FGDs). First, it presents the results for growth sectors and branches of economic activity, as well as those for sectors and branches where inequalities in access to employment affect women and young people to a greater or lesser extent. Next, the barriers to employment for women and young people in the various sectors are analysed. Finally, the employment potential by sector and industry is estimated and their distribution by age group and gender is analysed.

Growth sectors in Mali's economy

This sub-section aims to identify the economic sectors that have contributed the most to vocational training and the growth of Mali's economy over the past decade. Mali's economy recorded a mean annual growth rate of 5.76% (±3.64) over the period 2012-2020 (National Accounts, 2021). Figure 3 illustrates the trends in the percentage share of the contribution of various economic sectors to the percentage change of Gross Domestic Product (GDP) of Mali over the period 2012 to 2020.

The primary sector occupies a significant role in Mali's economy. Indeed, the sector represents, on average, 40.67% (±0.72) of GDP and has contributed 2.07% (± 2.22) to its percentage change. This sector is followed by the tertiary sector, whose mean percentage share is 38.60% (± 1.73). The mean contribution of the tertiary sector to the variation in the percentages of GDP is 2.29% (±1.67). The secondary sector has had a relatively lower contribution to Mali's Gross Capital Formation, with a mean percentage share of 20.83% (± 1.70). Its mean contribution to GDP growth is 1.40% (±1.81).

In summary, the results demonstrate that it is the primary and tertiary sectors that have contributed in a relatively higher manner to Mali's Gross Capital Formation and the percentage variation of Mali's GDP over the period 2012-2020. However, it is evident that it is the tertiary sector that has contributed the most to the growth in GDP over that period. In the subsequent section, we will examine the trends in the percentage share of various branches of economic activity to the variations in percentages of their respective economic sectors.

Figure 3: **Trends in the percentage share of the contribution of various sectors to Gross Domestic Product**
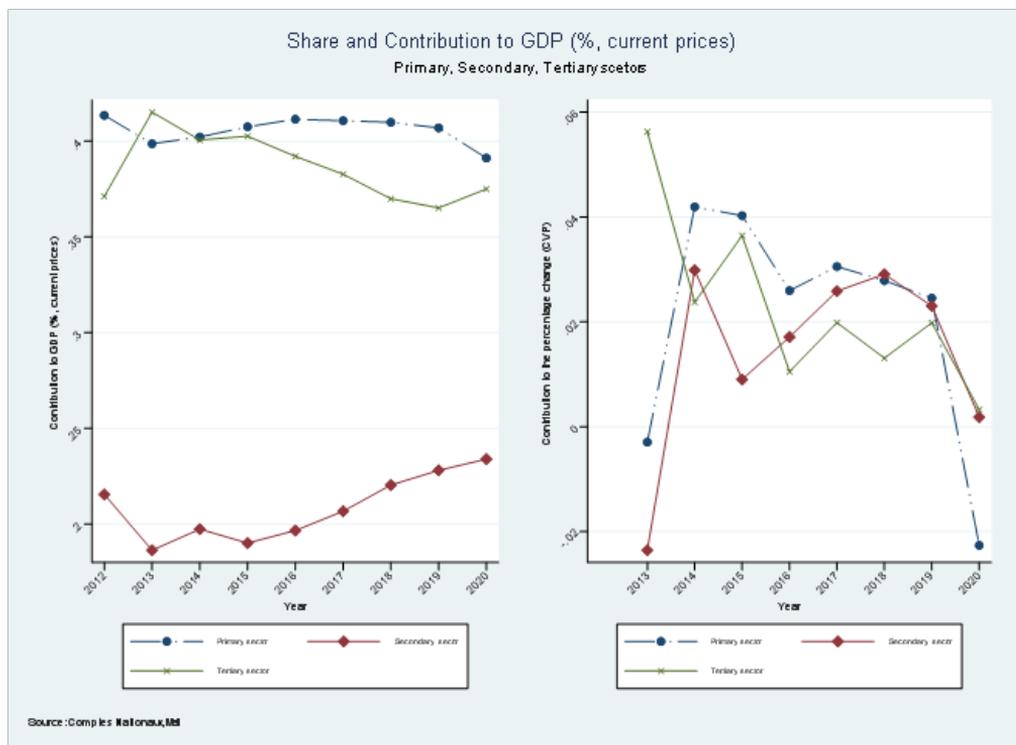
Growth economic activity branches by sector

In sub-section 4.1, it was indicated that it is the primary and tertiary sectors that have had a relatively higher contribution to formation and the growth of Mali's GDP over the period 2012-2020. In this second sub-section, we will identify the branches of activity that contributed the most to training and growth in those economic sectors.

Primary sector

The primary sector is the sector with the highest contribution to Mali's Gross Capital Formation over the period 2012-2020. This sector includes the following branches of activity: subsistence farming; export-oriented agriculture; pastoralism and hunting; forestry and fruit gathering; fishing and mining activities. Figure 4 shows the trends in the percentage share of the contribution of these branches to the variations in the percentage share of GDP by the primary sector between 2012 and 2020. The sector registered a mean average growth rate of 5.10% (±5.50) (National Accounts, 2021). Subsistence farming, pastoralism and hunting occupied a significant position in the trends of the primary sector. Indeed, between 2012 and 2020, these two areas of activity each represented a mean of

more than 39% of the GDP of the primary sector, or 41.01 % (±1.89) for subsistence farming and 39.10 % (±1.87) for pastoralism and hunting. The mean contribution of these two areas of activity to GDP growth in the primary sector (5.10±5,50) of GDP in the primary sector are 2.13% (±3.87) and 2.48% (± 0.90), respectively. All the other branches of activity have also contributed positively but weakly to growth in the primary sector, with the exception of forestry and fruit harvesting. The average contribution of the latter branch of activity to growth in the primary sector is -0,29% (±2.21). They are definitely the two areas in the primary sector that make the least contribution due to advanced deforestations and the expansion of the desert, coupled with recurrent droughts, all of which are local phenomena attributed to climate change in Mali.

Figure 4: Trends in the percentage share of contribution of branches of activity in the primary sector to variations in the percentages of GDP

Source : Comptes Nationaux, Mali
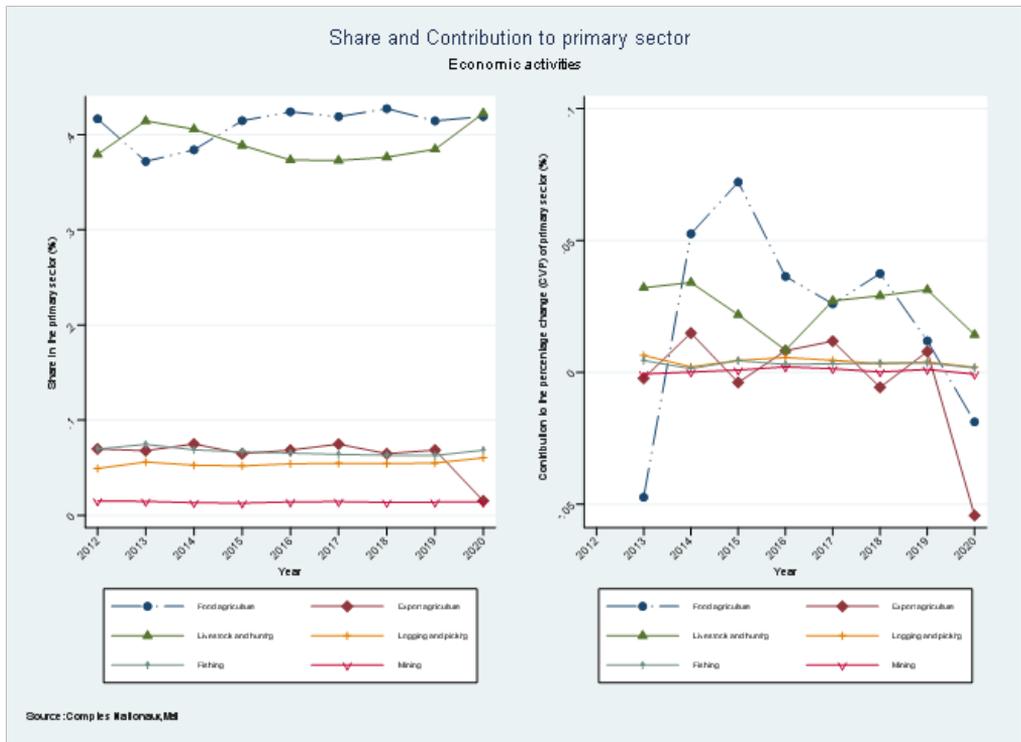
Secondary sector

The secondary sector has made a relatively lower contribution to formation and growth in Mali's GDP. This sector includes agri-food industries; textile industries; metallurgy, foundries (gold); other industries; electricity and water; and construction. The secondary sector registered a mean annual growth rate of 7.14% (±8.87) over the period 2012-2020. Figure 5 gives the trends in the percentage share of the contribution of these areas of activity to the variations in the percentage of the sectorial value added, as a percentage over the same period.

Figure 5: Trends in the percentage share and the contribution of branches of activities to the percentages change of GDP in the secondary sector
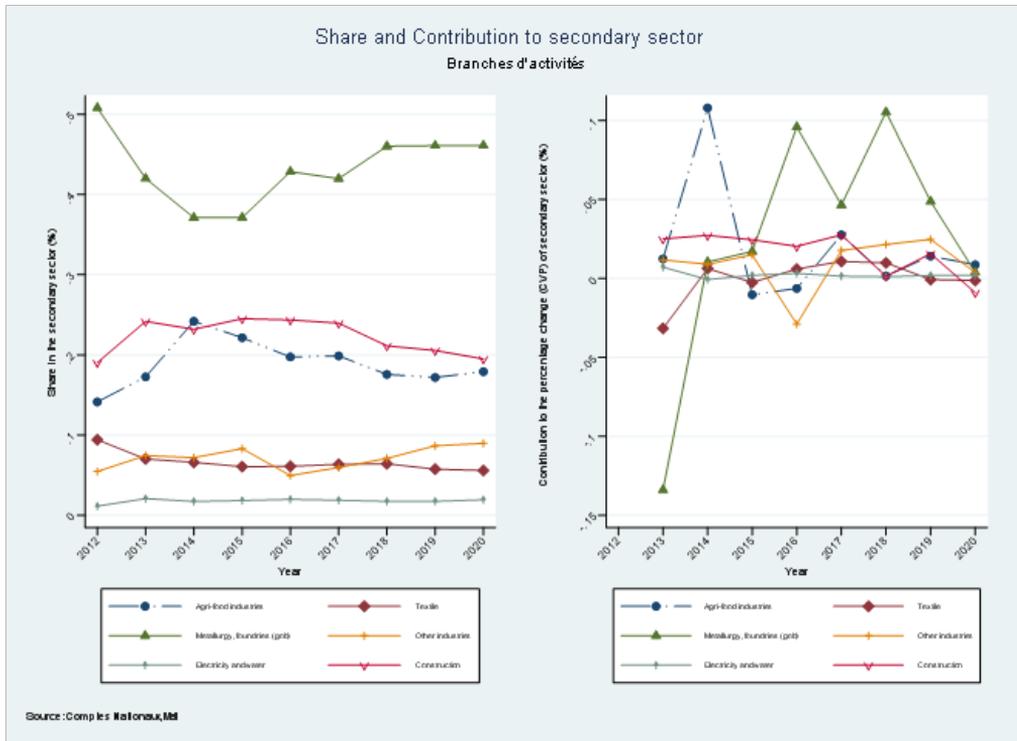
Metallurgy and foundries (gold), construction and agri-food industries played a significant role in the trends in the secondary sector. Indeed, between 2012 and 2020, the average share of each of the branches of activity was 43.35% (±4.47) for metallurgies and foundries (gold), 22.27% (±2.21) for construction and 18.89% (±2.8) for agri-food industries. These three branches of activity have also contributed greatly to growth (7.14 ±8,87) of GDP of the secondary sector, with 2.42% (±7.41), 1.66% (±1.34) and 1.95% (± 3.77). All the other branches of activity also contribute positively to the growth of the sector, except for the textile industry whose mean contribution is -0.04% (± 1.346). It is important to note that over the years, the textile industry has experienced difficulties related to international competition arising from imports from Asia and used clothes imported from the West. One of the two largest textile factories is currently experiencing significant interruptions in its business due to a slump in the sales of its products and because of the advanced state of dilapidation of its equipment and facilities, whose maintenance and repair costs overstretch production costs.

Tertiary sector

The tertiary sector is the second highest contributor towards Gross Capital Formation and the highest in terms of the variation in the percentage of Mali's GDP between 2012 and 2020. This sector includes areas of activity such as trade, hotels, and restaurants; transport and communications; financial activities; trade and business services; public administration activities; other services; and production attributed to banking services. The tertiary sector registered a mean annual growth rate of 5.92% (±4.46)[8] (National Accounts, 2021). Figure 6 shows trends in the percentage share of the contribution of these branches of activity to the growth of GDP through the tertiary sector. The average share of trade and that of public administration activities represented close to 60% of GDP of the tertiary sector, at 31.06% (±1.45) and 28.43% (±0.94), respectively. The average annual contribution of these two branches of activities to the growth (5.92±4,46) in the tertiary sector are at 1.47% (±2.14) and 1,58% (±0.79), respectively.

Figure 6: Trends in the percentage share and the contribution of branches of activities to the percentages change of GDP in the tertiary sector
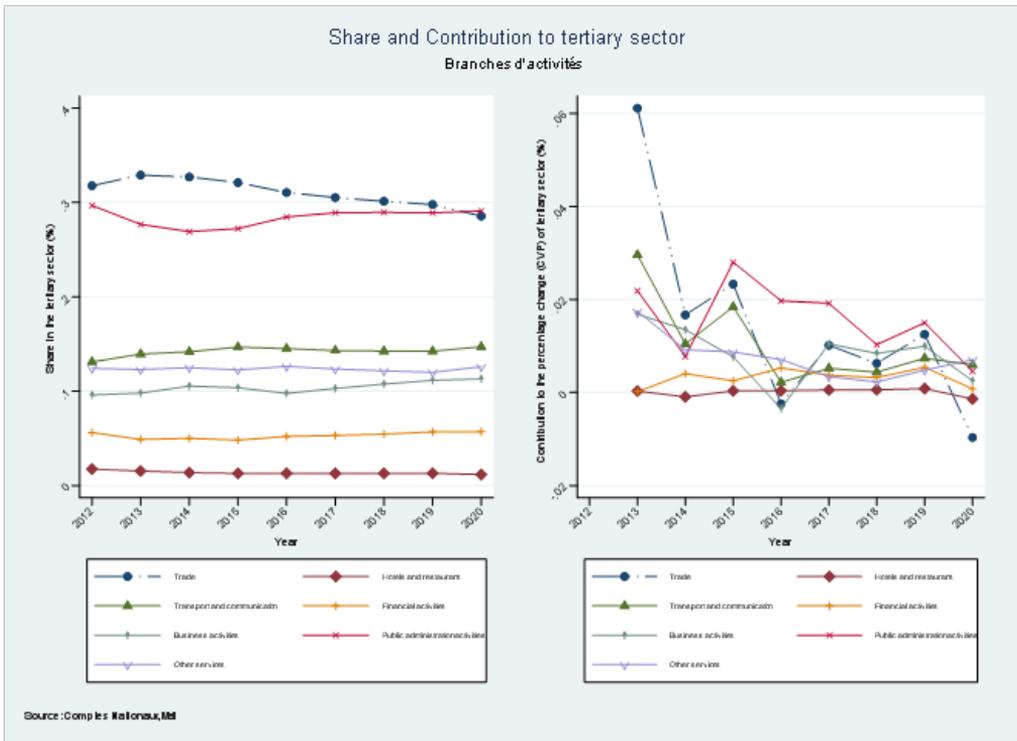

The transport and communications branches and those of other services occupy the third and fourth positions, respectively, with an average share of 14,22% (±0.49) for transport and 12,36% (±0.20) for communications. The mean contribution of

these branches of activity to the tertiary sector is 1.04% (±0.92) for transport and communications, and 0.75% (±0.47) for other services.

Employment situation according to sex and area of activity

This sub-section gives a descriptive analysis of the overall situation regarding employment in Mali, while at the same time highlighting the gender inequalities evident in various sectors of its economy. Subsequently, the analysis will focus on the various branches of economic activities.

Figure 7 shows the distribution of the working age population of Mali (15 years and above), according to whether they are employed, unemployed, or in a situation of worklessness (population outside the workforce).

Figure 7: Distribution of the working age population in Mali, 2020
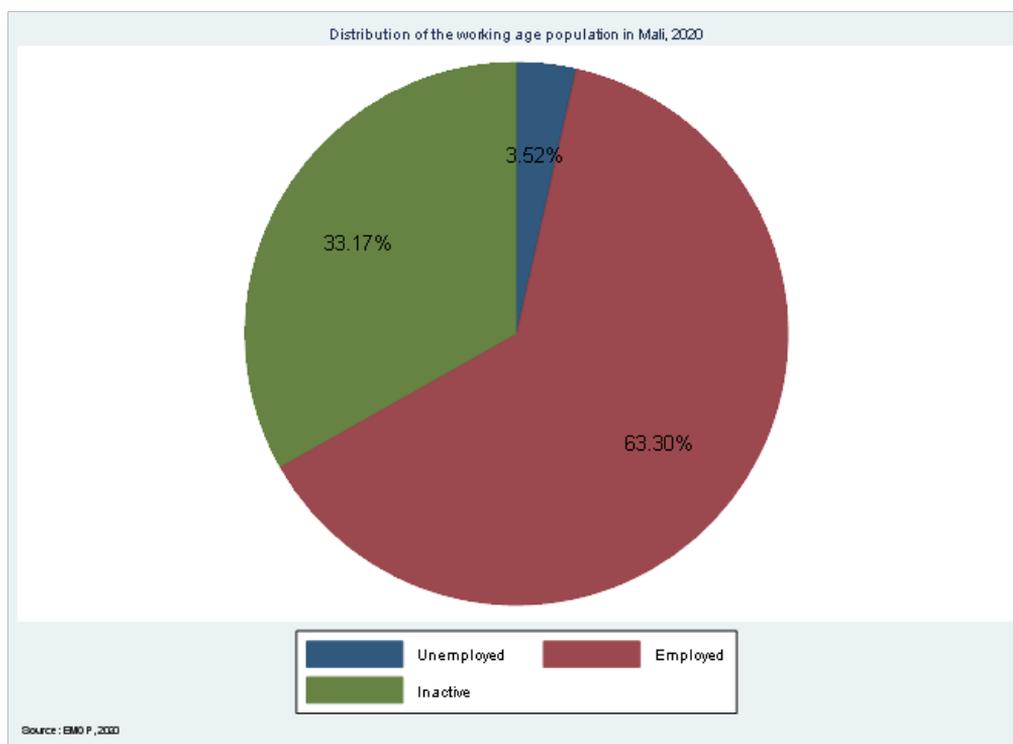
This figure presents data from the Modular Permanent Household Survey (EMOP, 2020)[9]. According to data from EMOP (2020), the working age population in Mali is close to 10 million people, or close to half of the country's total population. Figure 7 indicates that 63.30% of this population was employed in 2020 against 3.52% unemployed and 33.17% were in an inactive situation (population outside the workforce).

However, this high rate of employment obscures inadequate employment, notably for vulnerable[10] and precarious[11] workers. These inadequate jobs are mostly found within the informal sector. Figure 8 shows the distribution of jobs according to the status of workers in 2020. Among those employed (6,327,534), it is evident that 60.00% were in a vulnerable position, while half of them (49.69%) were in a precarious job.

Figure 8: Distribution of jobs according to the status of workers, 2020
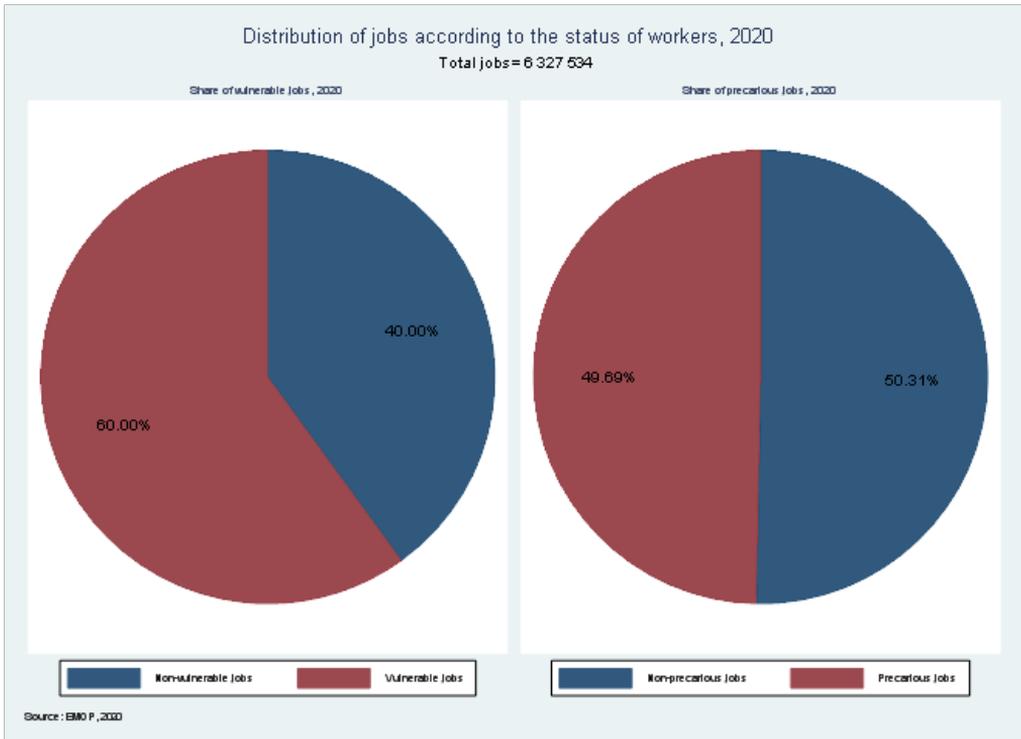
Figure 9 presents the distribution of the unemployed population according to sex, age, area of residence, and level of education. The figure shows that the phenomenon of unemployment has a higher impact on women (51.14%), youth aged between 15 and 35 years (71.63%), uneducated people (44.08%) and people who reside in urban areas (53.50%)[12]. In addition to having a high number of their counterparts within the unemployed bracket, youth and women, and more specifically those that are uneducated and live in rural areas, count among those who have the highest numbers in terms of occupying precarious and vulnerable jobs. These results suggest that public policies in Mali in the fight against unequal access to employment should be the focus more on youth and women, and more specifically those that are uneducated and live in urban and rural areas.

Figure 9: **Distribution of the working age population in Mali according to gender, age, area of residence and the level of education**
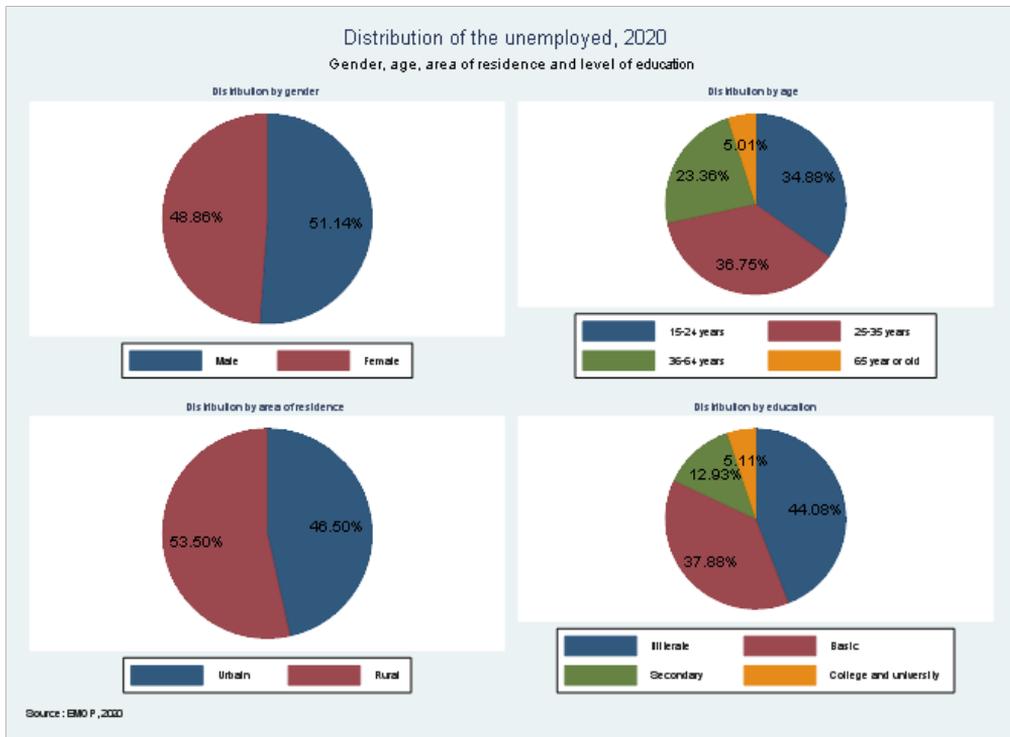
Furthermore, public interventions in Mali targeting the improvement of the employment conditions of workers should be more focused on women, particularly those who are illiterate and live in rural areas. Indeed, Figure 10 shows that vulnerable jobs in Mali are majorly held by women, illiterate people, and those that live in rural areas.

Figure 10: Distribution of vulnerable jobs in 2020
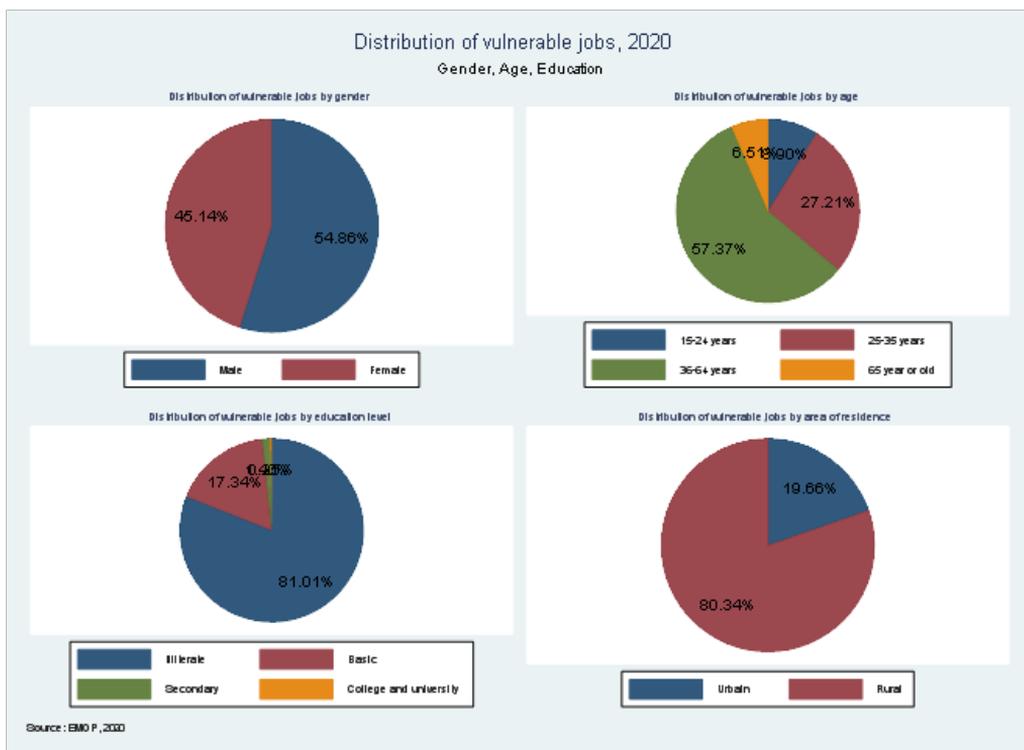
Figure 11 shows the trends in the employment of women in various sectors of Mali's economy over the period 1990-2016. They use data from the World Bank available on their website[13] on the page "Data Bank/Jobs".

Figure 11: Trends in the employment of women in the various sectors of Mali's economy, 1990–2016
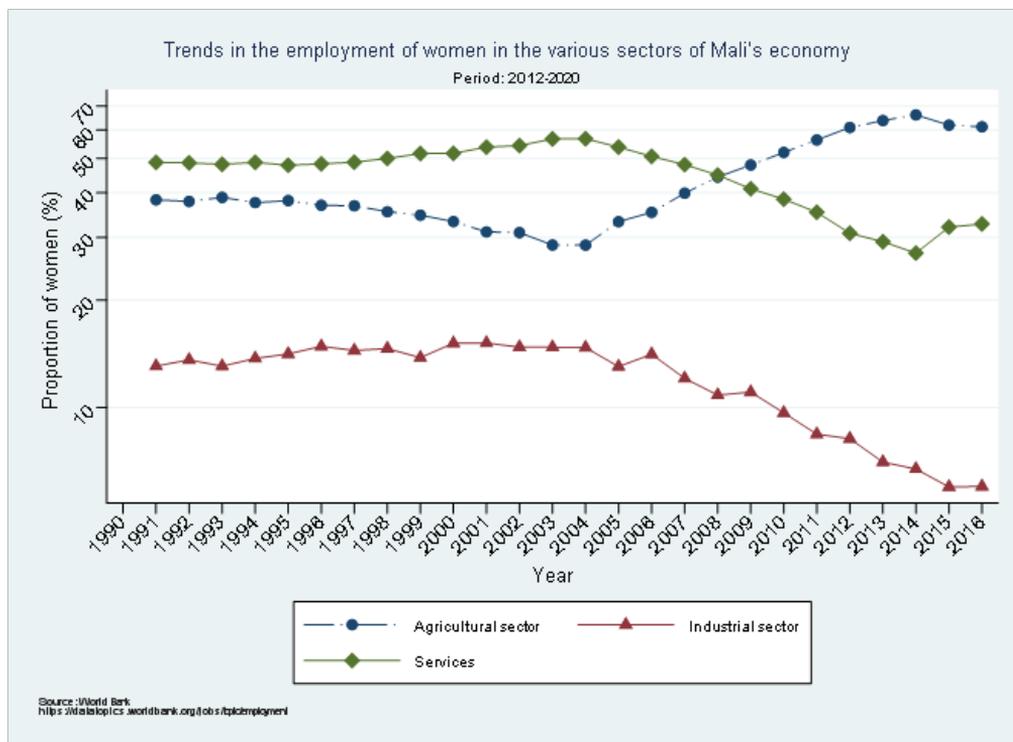
As the figure shows, over the period 1990-2016, women had a relatively low level of representation compared to men in all sectors of the economy. However, it is evident that they are more present in the services[14] (tertiary) and agricultural[15] (primary) sectors than they are in the industrial[16] (secondary) sector. Indeed, the mean annual rate of participation by women in the services and agricultural sectors stood at 45.28% (±8.91) and 42.68% (±11.92), against 12,05% (±3,13) in the industrial sector.

These results thus highlight the persistence of inequalities in access by women to jobs in all sectors of Mali's economy. However, the inequalities are more significant in the industrial sector than in other sectors, which thus suggests that public policies that target the fight against inequalities in access to jobs should be more focused on the barriers related to the insertion of women into the industrial sector. Nevertheless, inequalities to the detriment of women are prevalent in the other sectors. Consequently, there is still need for efforts to be undertaken in all sectors of Mali's economy to fully achieve equality of employment access for women. Regarding the results presented in the previous sections relative to the profile of the unemployed, such efforts could translate into the professional training of women, the education of girls and keeping them in school at least until the completion of the secondary school level of education, etc.

Branches of activity and the employment of women

The objective of this sub-section is to examine the proportion of women employed per branch of activity to distinguish between those that employ many women and those that employ fewer numbers of women. Figure 12 presents the distribution of employees according to gender in the various branches of economic activity during the year 2020. The inequalities at the expense of women in terms of access to employment are quite evident in several branches of economic activity. Indeed, as Figure 11 shows, women are absent in almost 5 out of the 21 branches of activity. These are the branches of the production and distribution of water, sanitation, waste treatment and management; real estate services, transport, and warehousing; construction and activities of the production and distribution of electricity and gas. In 2020, women represented between 0% and 15% of employees in these five branches of activity. One could therefore deduce that the inequalities in access to employment by women are much higher in these areas of activity.

Women were poorly represented in the branches of activity such as information and communication; public administration; specialized, scientific, and technical activities; support and administrative activities, teaching and mining activities. Inequalities to the detriment of women are high in those branches of activities whereby the percentage share of women in employment is between 16% and 30%.

Figure 12: Distribution of jobs according to gender in various branches of activity, 2020
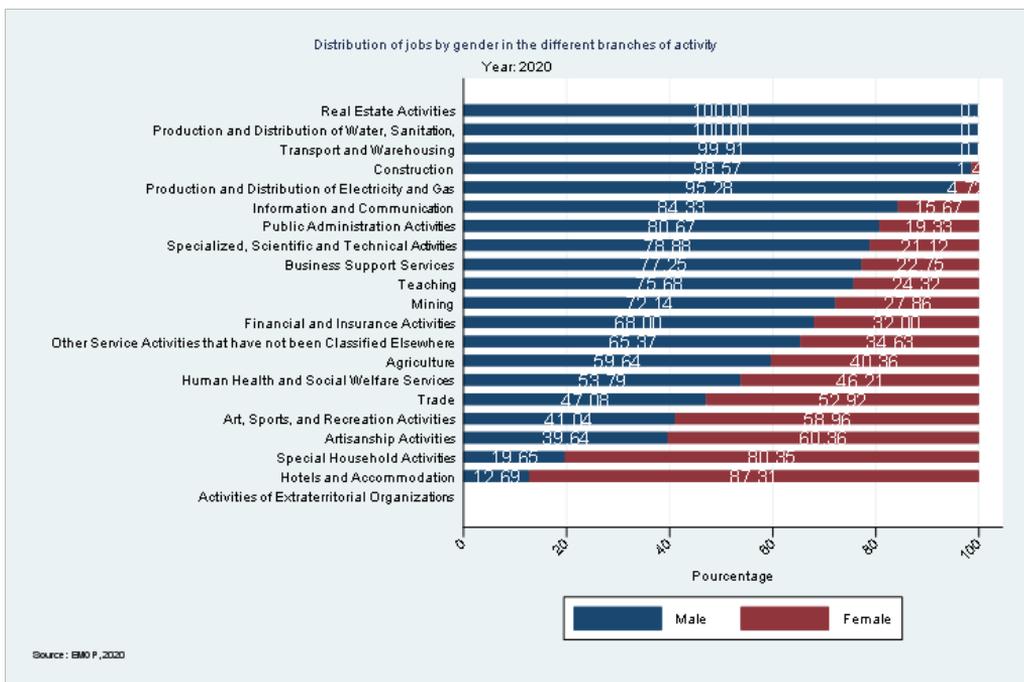
Women were poorly represented in the financial and insurance branches of activity, the other service activities that have not been classified elsewhere and in agriculture. The percentage share of women that work in these branches of activities was between 32% and 46%. One could state that the inequalities to the detriment of women are relatively low in these branches of activity, since it is already better than the case in the branches of activities that have already been mentioned above.

Besides, it is evident that inequalities regarding access to employment are almost inexistent in the other branches of activities where women are highly, or very strongly represented. These include trade; artisanship, sports and recreation, artefacts, special household activities; hotels and restaurants, activities related to human health and social activities. Women represent between 46% and 100% of the jobs in these branches of activity. Unfortunately, there is no doubt about the fact that these branches of activity predominantly represent informal employment that does not pay well and does not provide formal social security benefits.

These results demonstrate that inequalities regarding access to jobs have a high impact upon women in 14 out of 21 branches of economic activity in Mali. This suggests that to effectively fight inequalities in access to employment for women, public policies would focus more on the barriers related to the insertion of women in these branches of activity. Nevertheless, support would be necessary not only to maintain the high presence of women in the other branches of activity where they are strongly represented, but also to increase their income and improve their social security. The areas of activity that employ the highest number of women seem to be those in which informal employment is predominant, jobs do not pay well, and there is no social security.

Branches of activity and youth employment

This sub-section seeks to examine the proportion of youth employed per branch of activity to distinguish between those that provide more jobs for the youth and those that employ fewer numbers of youth. Figure 13 presents the distribution of jobs according to the age group for various branches of activity. The figure demonstrates that inequalities in access to employment has a high impact on youth (aged between 15 and 35 years)[17] in 7 out of the 21 branches of economic activity. These are notably the activities of hotels and restaurants; transport and warehousing; office support services; teaching; specialized, scientific, and technical services; public administration and arts, sports, and recreation activities. The percentage of youth that work in these areas of activity is between 16% and 45%. The youth are also lowly represented in a similar manner within the information and communication branches of activity; real estate; human health activities and social actions; construction; trade and agriculture. The percentage share of youth in these branches of activity was between 46% and 55%. One could conclude that equality is almost inexistent in regard to the representation of the youth in these branches of activity.

Figure 13: Distribution of jobs according to age in the various branches of activity, 2020

Distribution of jobs by age in the different branches of activity
Year: 2020

Branch	[15-35 years]	[36 years or old]
Production and Distribution of Water, Sanitation,	100.00	0
Special Household Activities	91.22	8.78
Mining	65.44	34.56
Other Service Activities that have not been Classified Elsewhere	57.23	42.77
Production and Distribution of Electricity and Gas	56.41	43.59
Financial and Insurance Activities	56.33	43.67
Construction	52.95	47.05
Real Estate Activities	52.48	47.52
Agriculture	49.93	50.07
Trade	48.53	51.47
Artisanship Activities	47.82	52.18
Human Health and Social Welfare Services	46.27	53.73
Business Support Services	42.79	57.21
Hotels and Accommodation	42.46	57.54
Transport and Warehousing	41.47	58.53
Information and Communication	40.17	59.83
Public Administration Activities	39.31	60.69
Teaching	35.82	64.18
Specialized, Scientific and Technical Activities	33.45	66.55
Art, Sports, and Recreation Activities	22.33	77.67
Activities of Extraterritorial Organizations		

Pourcentage

Source: EMOP, 2020

Besides, the youth do not suffer from inequalities in other branches of activity where they are strongly or very well represented. These include special household activities; mining activities; production and distribution of electricity and gas; other service activities not classified elsewhere; artisanship; financial and insurance activities and the production and distribution of water, sanitation, waste treatment and management. In 2020, they represented between 56% and 100% of employees in these areas of activity.

In summary, these results indicate that inequalities in access to employment strongly affect the youth in 7 out of 21 branches of economic activity, whereas in the other branches of activity the youth are predominant. Consequently, the fight against inequalities regarding access by the youth to employment could be effective if public policy focuses more on the barriers linked to the insertion of youth in the 7 branches of economic activity where youth are not well represented. Nevertheless, they could maintain the support towards youth in the other branches of activity where they dominate.

Obstacles to working opportunities for women and the youth in Mali

The analysis undertaken in the above sub-sections allowed for the identification of the sectors and branches of economic activity that are growing and the sectors and branches of activity whereby inequalities in access to employment have more or less impacted upon women and the youth. The results of these analysis also reveal that women and the youth do not seem to be experiencing the same difficulties or are not beneficiaries of similar opportunities according to the sectors and the branch of activity. According to Chakravarty et al. (2017), barriers to the employment of women and youth could be due to factors related both to the supply and the demand for labour. In this sub-section, we will examine the obstacles to working opportunities that are experienced by the suppliers of labour and job seekers in Mali.

On the demand-side

In this sub-section, we focus upon the constraints experienced by firms in carrying out their business in Mali, and the opportunities offered by Mali's government to promote the employment of youth and women. Obstacles to employment opportunities experienced by firms could have an indirect impact on their labour demand in the economy. For example, obstacles to employment opportunities for firms could prevent or encourage not only their investment decisions, but also their expansion, and by a knock-on effect, the level of their labour demand.

Constraints experienced by firms while conducting their business in Mali

In this sub-section, we pay particular attention to the constraints experienced by firms that conduct business in Mali. Such constraints are documented in the national surveys carried out by the World Bank[18] in firms from all sectors of Mali's economy, except the agricultural sector. The data contains information on the constraints faced by firms of all sizes (small, medium, and large) and covers all the branches of activity in the industrial sector, from construction; sales and repairs of motor vehicles; wholesale and retail trading; hotels and restauration; warehousing; transport and information and communication technologies.

Figure 14 presents the distribution[19] per sector of the factors perceived by the firms as their major constraints. This figure shows that access to finance, political instability, practices in the informal sector and access to electricity are the factors cited by a highly significant number of firms in the industrial and services sectors. However, the proportion of firms that have cited these factors as their main obstacles are not identical according to sectors. For example, it is evident that almost 25% of the firms in the services sector find that political instability is a major constraint, against 19% in the industrial sector. Equally, corruption practices in the informal sector are perceived

to be major constraints by 19% and 18% of firms in the services sector, respectively, against 8% and 13% of those in the industrial sector, respectively. Equally, access to electricity is cited as the main obstacle by 15% of the firms in the industrial sector against only 4% of the firms in the services sector. Access to finance seems to be a major obstacle in the two sectors by an almost identical proportion, or 21% of the firms in the industrial sector and 20% of those in the services sector. Other factors are shown to be obstacles by a low proportion of firms in the two sectors of the economy.

Figure 14: Distribution of factors perceived by firms to be the main constraints, according to sector, 2016
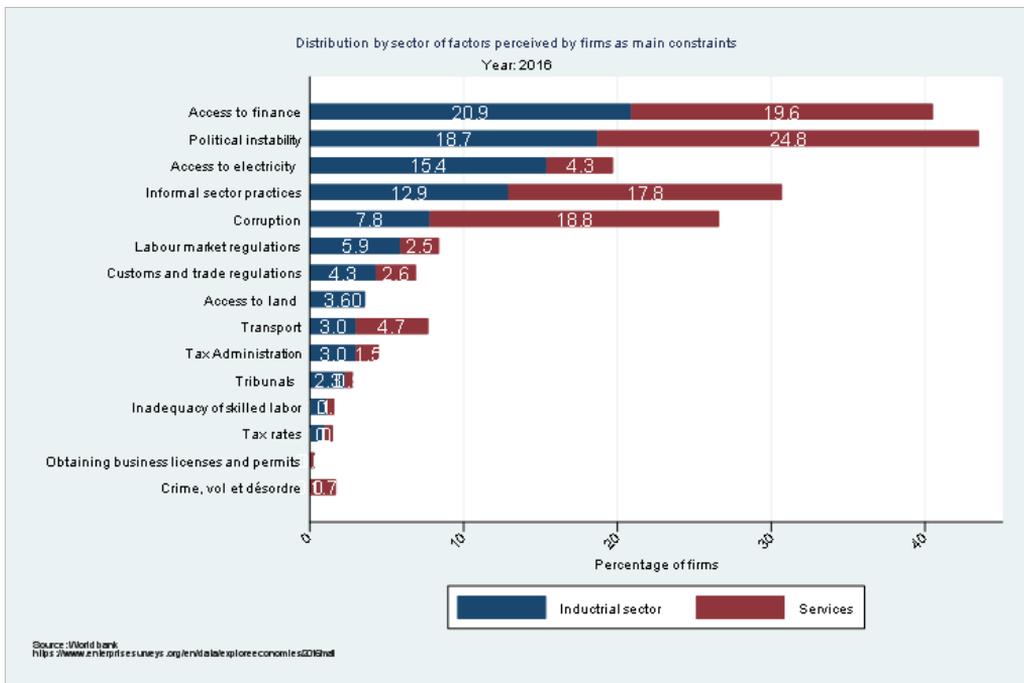
These results suggest that public policies that aim to promote investments and employment creation in the various sectors of Mali's economy should focus on various instruments that differ according to the sector. For example, measures that aim to promote investment and employment creation in the services sector could focus more on political stability, the fight against corruption, and unfair competition from informal businesses. However, they could effectively promote investment opportunities and the creation of employment in the industrial sector by improving electricity supply. Nevertheless, policies that ease access to financing could prove to be quite useful in the two economic sectors. Finally, to promote the employment of women and the youth, and to eliminate inequalities, public interventions could focus more on the branches of activity that provide fewer employment opportunities to these groups of people. The support could, however, be maintained, if it does exist, in the other branches of activity in which women and the youth are adequately or highly represented.

Structural barriers to working opportunities for the youth and women

Youth unemployment in Mali is a perennial problem due to several structural factors. Indeed, according to APEJ, the problem of youth unemployment in Mali could be explained through: (i) discrepancies between academic training and the needs of the labour market; (ii) a low level of professional experience and qualifications; (iii) a regional disparity in terms of under-employment; (iv) difficulties regarding access to finances by youth; and (v) a low absorption capacity by the civil service and the private sector.

Opportunities for the promotion of youth and women employment

To respond to the perennial problem of youth and women under-employment in Mali, the government has put in place several projects over the last two decades through various policies and institutions. For example, in July 2009 and March 2015, the Government of Mali adopted the National Professional Training Policy[20] and the National Employment Policy[21] and put in place its Operational Action Plan (2015-2017). Regarding specific actions towards the promotion of women and gender inequality, in 1993, Mali put in place a commission that has since then been dedicated to the advancement of women, under the leadership of a commissioner with the rank of Minister. In 1997, the Government of Mali created a Ministry for the Advancement of Women, the Child, and the Family (MPFEF). The creation of this Ministry indicates Mali's political will to implement the commitments taken during the Beijing Conference and to prioritize gender equality. The mission of this Ministry was expanded to the formulation and implementation of a national policy on the advancement of women, and was strengthened by the creation in 1999, of the National Directorate for the Advancement of Women. Since 1997, this Ministry has pursued the implementation of the First Action Plan for the Advancement of Women (1996-2000). In 2002, it succeeded in formulating and having a National Gender Policy, which was later adopted by the Cabinet (in 2010)[22].

Specific interventions for the employment of youth have essentially been implemented by APEJ, which is a public institution established under Act No. 03-031/AN-RM of 25th August 2003, modified under Act No. 2014-068/AN-RM of 31st December 2014. APEJ is placed under the authority of the Ministry for Employment and Vocational Training. At a national level, APEJ is represented through regional coordination in each of the nine administrative regions of Mali and the district of Bamako. Its mission is to implement the National Youth Employment Programme (PEJ) to respond to the perennial problem of unemployed young graduates in Mali. It thus advocates for job creation for youth between the ages of 15 and 40 in rural and urban areas, notably through facilitating their access to formal labour markets, and financing. Within the PEJ framework, APEJ has implemented several projects and actions such as the internship programme that was previously referred to as "Volontariat de l'APEJ". Since 2004, this programme has cost 12 billion FCFA and has

benefitted 11 cohorts of young graduates in Mali, providing a total of 43,162 interns of which 51% were women. Furthermore, APEJ has placed 11,974 young graduates in work placement in private firms. These programmes have allowed more than 73% and 3% of the 19,736 young interns of the cohorts 7 to 10, respectively, to obtain either a job or an additional training programme.

On the supply-side

This sub-section presents the results of data analysis for individual interviews and FGDs carried out on key informants. An analysis of the content of the interview data allows us to formulate five (5) categories according to the responses of the interviewees on the barriers to working opportunities by women and youth in Mali. These categories include technical, social, political, institutional and economic barriers and opportunities related to the same. It is important to note that the data collected does not allow us to bring out the sectoral specificities in terms of obstacles and opportunities to the employment of women and youth.

Social barriers

According to a majority of key informants, the social norms (religious and cultural) are a serious hindrance to the employment of women and youth in Mali. Indeed, men and women have regulated roles within the household. The society, according to our norms and customs, preserves certain activities for women such as housework, dyeing, small-scale trading, etc, which are more or less not well-paying jobs or are done for free and are also jobs that mostly belong to the informal sector. Lack of social networks and relations and a lack of self-confidence are also often cited by interviewees in the two categories. It is often said that a leg-up in the labour market is worth much more than all the degrees in the world. Finally, lack of time and mobility is also one of the major constraints to the employment of women since, often, women who receive job offers outside their hometown or home village need the approval of their spouse.

Political and institutional barriers

According to most of the interviewees, the prevalent insecurity since the military coup d'état that took place in March 2012, combined with political and institutional instability has to a great extent worsened the already precarious employment situation of women and youth. The loss of control over a large part of the national territory and the rise in banditry and armed theft does not augur well for the development of the agricultural, livestock, transport, tourism and hotels, education, domestic and international trade sectors. Consequently, very few jobs have been created in these branches of economic activity, which are experiencing difficulties in growth.

Economic barriers

Lack of access to production equipment and lack of financial resources are what is mostly cited by informants as barriers on the economic front. These informants mostly work in public administration. According to a majority of the interviewees, lack of access to productive resources has a higher impact upon youth and women.

Employment opportunities for women and youth

Most of the interviewees indicated that there were several working opportunities for women and youth in Mali. For example, according to them, Mali's development partners are ready to invest in human resources by paying particular attention to the education and training of women and youth. Other elements are cited as factors that could facilitate the socio-professional insertion of women and youth. These include providing support for starting businesses and helping with the empowerment of women and the development of specific programmes targeted towards women and the youth. For example, there are training and insertion programmes for rural women, widows, and descolarized young girls.

However, several key informants feel that it is necessary to put in more effort towards facilitating the professional insertion of women and the youth. They indicate that providing information and workplace sensitization about the obligations of heads of enterprises in relation to putting in place affirmative policies that liberate women from all socio-political and cultural constraints would no doubt be of great benefit. Furthermore, territorial devolution, which gives increasing power to local entities, is an inexhaustible source in terms of the employment possibilities for the targeted groups. For example, communes, cercles, and regions can recruit their own personnel to provide decentralized technical services. To these could be added the commitment and permanent struggle by women and youth for affirmation to establish their deserved place in modern society, such as the enacting of legislation and regulations, incentives in favour of women and youth such as the Agricultural Orientation Law. New information and communication technology (NICT), through, for example, the development of e-commerce, the development of software and platforms, etc cannot be ignored.

Other proposals and recommendations that would ease the professional insertion of women and the youth have also been suggested by the interviewees. These include:

- Government intervention in providing opportunities for youth employment;

- Government support for self-employment;

- The Government could formulate a long-term employment policy;

- An increase in the intensification of financing for the youth;

- Training for self-employment;

- The development of programmes specifically targeted at the youth;

- Awareness - raising campaigns about the obligations of employers;

- An improvement of the suitability of vocational training, especially in rural areas, and the formulation of specific programmes geared towards the target groups;

- Ease of access to financing by the youth so that they may create their own business;

- Sensitization of employers;

- The need for good leadership that is upright, astute, patriotic, and capable of putting in place good governance structures; and

- The intensification of vocational training at the expense of university education.

Employment potential according to branches of activity

This sub-section presents the results of the estimated employment potential of each of the branches of economic activity, and is divided according to gender and age-group. The employment potential of a given branch of activity is estimated according to the maximum level of production that could be achieved subject to the available manpower and labour productivity. It is theoretically defined as the relationship between the potential production volume (maximum) of that branch, and the labour productivity less the actual number of jobs in that branch. The objective is to determine the branches of activity that have the highest job creation potential. We then start by stating the current production results, and the potential production results and the labour productivity, the total jobs available and the employment potential per branch of economic activity. Thereafter, employment potential is examined according to sex and age-group.

Total number of current, potential, and maximum jobs and the percentage share of employees

Table 1 presents the results of the current total number of jobs, the potential and maximum number of jobs that are available for each branch of economic activity, and the average share for jobs for each of the branches of activity. The maximum number of jobs available in each branch of economic activity corresponds to the sum of actual jobs in the branch and the employment potential that the said branch would probably[23] have regarding the weight of its annual average percentage share of jobs.

Table 1 shows that between 2013 and 2020, agriculture is the branch of activity that employed the highest number of workers among Mali's working age population of 10 million people. Indeed, agricultural activities branch employs 66% of that population. It is followed by trade activities and manufacturing, which employ 14% and 5% of the working age population, respectively. The average percentage share of other branches of activity ranges between 0% and 3%.

Table 1: **Distribution of the current number of jobs, potential number of jobs and maximum number of jobs and the average percentage share of employees per branch of economic activity**

Period	Branch activity	Current number of jobs (mean, 2013-2020)	Percentage share (mean, 2013-2020)	Employment potential (contingent to the mean)	Maximum number of jobs (Current emp+ Potential emp)
2013-2020	Agriculture	3,894,769	0.66	2,421,122	5,388,943
2013-2020	Mining	74,209	0.01	46,131	130,139
2013-2020	Manufacturing activities	277,930	0.05	172,771	159,525
2013-2020	Production and distribution of water, sanitation,…	5,091	0.00	3,165	46,870
2013-2020	Production and distribution of electricity and gas	2,141	0.00	1,331	6,374
2013-2020	Construction	97,558	0.02	60,646	121,107
2013-2020	Trade	834,341	0.14	518,655	2,132,307
2013-2020	Transport and warehousing	93,761	0.02	58,285	220,702
2013-2020	Accommodation and restaurants	16,312	0.00	10,140	60,283
2013-2020	Information and communication	9,193	0.00	5,715	4,074
2013-2020	Financial activities and insurance	8,938	0.00	5,556	5,588
2013-2020	Real estate activities	1,628	0.00	1,012	1,628
2013-2020	Specialized, scientific and technical activities	60,444	0.01	37,574	60,444
2013-2020	Business support activities	33,170	0.01	20,619	33,170
2013-2020	Public administration activities	69,433	0.01	43,162	27,031
2013-2020	Teaching	99,640	0.02	61,940	99,640

Table 1 Continued

Period	Branch activity	Current number of jobs (mean, 2013-2020)	Percentage share (mean, 2013-2020)	Employment potential (contingent to the mean)	Maximum number of jobs (Current emp+ Potential emp)
2013-2020	Human health and social welfare services	25,650	0.00	15,945	25,650
2013-2020	Art, sports, and recreation activities	21,179	0.00	13,166	21,179
2013-2020	Other service activities that have not been classified elsewhere	101,942	0.02	63,371	110,194
2013-2020	Special household activities	173,080	0.03	107,592	173,080
	Total	**5,900,410**	**1.00**	**3,667,897**	**8,827,929**

Source: Calculations by the authors using data derived from EMOP (2013-2020)

It is important to note that the three branches of activity are also those in which women and the youth have a weak or strong representation. For example, in the agricultural branch of activities, the proportion of women employed is between 31% and 45% and that of the youth aged between 15 and 35 years is 46%-55%. Regarding trade activities, the percentage share of women and youth that are employed is between 46% and 55%. In relation to manufacturingactivities, the percentage of women that are employed ranges from 56% to 100% and that of the youth is between 46% and 55%.

Mean labour productivity

Figure 15 presents the results of labour productivity per branch of economic activity. Labour productivity in a branch of economic activity corresponds to the relationship between average annual productivity and the total number of jobs in that branch.

Figure 15: Labour productivity per branch of economic activity
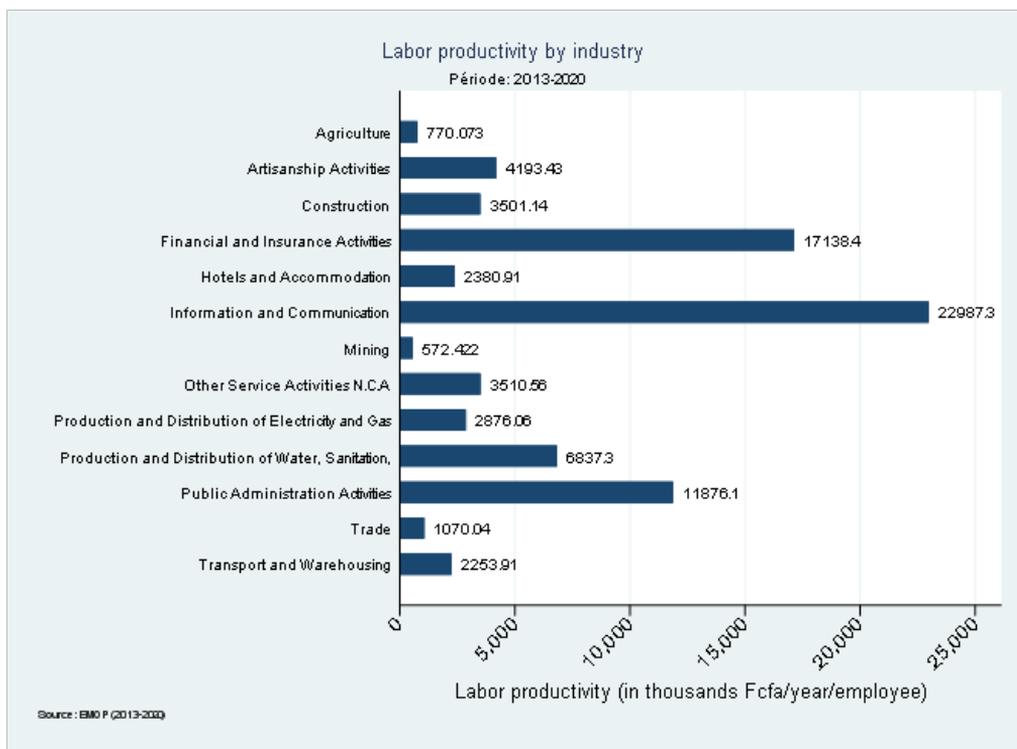
Figure 15 illustrates how the mean labour productivity in the various branches of economic activity is quite heterogeneous. Indeed, it is relatively higher in the information and communication branches of activity (22,987,300 FCFA), followed by financial and insurance services (17,138,400) and production, water distribution and sanitation activities (6,837,300). However, average labour productivity is relatively lower in the mining industry (572,422), agriculture (770,073) and trade (1,070,040). In other branches of activity, it varies from 2,253,910 for transport and warehousing to 351,056 for other service activities that have not been classified elsewhere.

Current production potential, production gap

Figure 16 presents the results of current and potential production and the production gap per branch of economic activity.

Figure 16: Current production, potential production, and the production gap per branch of economic activity

Actual, potential, and gap production by industry
Period: 2013-2020

Production (in billion CFA francs/year)

Actual production · Protential production · Production gap

Source : Comptes Nationaux (2013-2020) et EMOP (2013-2020)
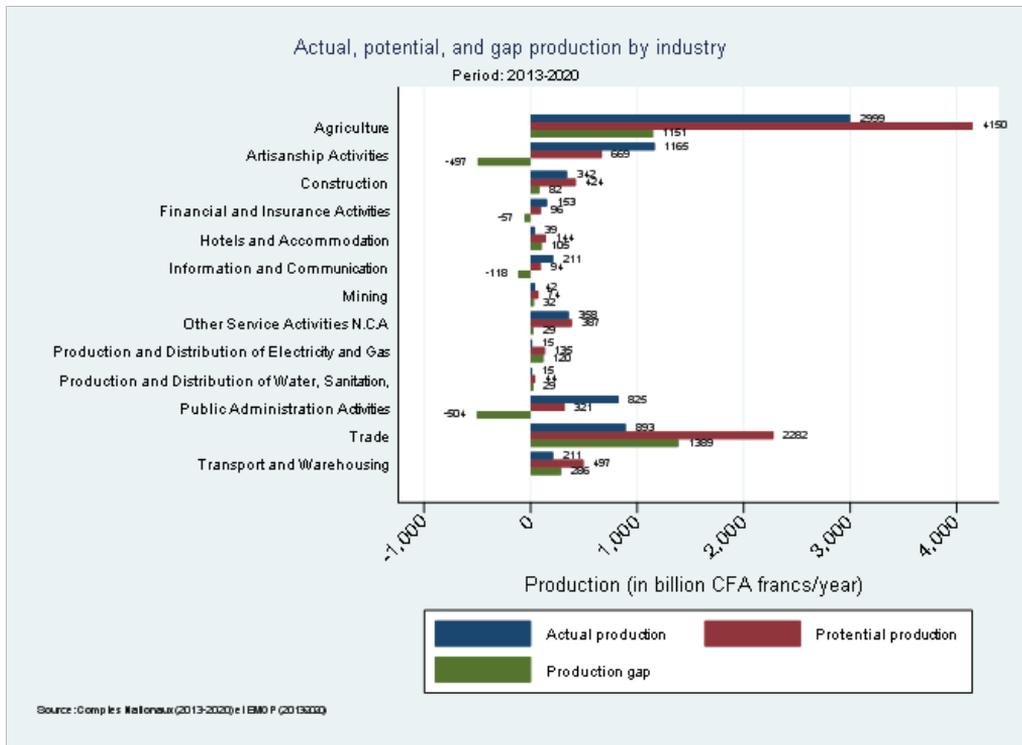
This figure shows that current production surpasses the production potential in 4 out of 13 branches of the economic activities examined. These include financial activities, public administration, artisanship, information, and communication activities. These results agree with those previously presented, whereby we establish that labour productivity is relatively much higher in these branches of activity compared to other branches, which implies that these branches of activity are technically efficient. The results could be explained by the strong presence of qualified and experienced labourers in these branches of activity. The percentage share of women and youth is relatively lower probably due to the high level of education and experience required to be employed in these branches. In the short-term, these branches of activity could be less inclined towards employing new workers given that they have attained their production potential. However, in the middle and long-term, the volume of employment in these branches of activity would rely upon the number of people who have reached retirement age.

Furthermore, in the nine (9) areas of economic activity, it is evident that current production is below the production potential. These branches of activity correspond to those where the average share of labour is relatively low. They are technically inefficient and could be considered as having employment potential. Furthermore, the percentage share of women and the youth is relatively significant or could be said to be quite high

according to the current jobs in these branches of activity, probably due to the low levels of qualification and experience required for employees in these branches of activity. In the sub-section that follows, we examine the structure of employment potential estimated from the maximum production that could be attained in relation to the available manpower and labour productivity in the various branches of economic activity.

Structure of the Employment Potential per Branch of Economic Activity

Table 2 presents the results of the employment potential per branch of economic activity, and the structure according to gender and age group. The results demonstrate that the employment potential in the various branches of economic activity differs according to the branch. It is relatively higher in the branch of agricultural activity (51.04%), followed by trade (44.34%) and transport and warehousing (4.34%).

Table 2:   Employment potential per branch of economic activity and its structure according to gender and age group

Branch of activity	Man	Women	15-35 years	36 years and above	Employment potential
Agriculture	838,790.25	655,384,22	800,926.97	693,247.50	**1,494,174.47**
Mining	40,372.02	15,557.99	34,484.72	21,445.8	**55,930.00**
Manufacturing activities	-61,313.48	-57,092.06	-61,317.63	-57,087.92	**-118,405.55**
Production and distribution of electricity and gas	39,643.51	2,136.13	27,295.97	14,483.67	**41,779.64**
Production and distribution of water, sanitation	3,934.43	297.89	2,153.43	2,078.89	**4,232.32**
Construction	23,181.96	367.00	12,316.39	11,232.57	**23,548.96**
Trade	539,785.72	758,180.16	648,910.52	649,055.37	**1,297,965.88**
Transport and warehousing	125,543.38	1,397.77	59,843.19	6, 097.97	**126,941.15**
Accommodation and restaurants	9,099.65	34,870.54	23,539.69	20,430.49	**43,970.18**
Information and communication	-3,920.03	-1,199.00	-2,548.98	-2,570.05	**-5,119.03**
Financial and insurance activities	-2,159.14	-1,190.80	-1,759.41	-1,590.52	**-3,349.93**
Public administration activities	-32,793.96	-9,607.65	-16,402.35	-25,999.25	**-42,401.61**
Other service activities that have not been classified elsewhere	5,153.04	3,098.88	4,932.18	3,319.74	**8,251.93**
Total	1,525,317.35	1,402,201.06	1,532,374.69	1,395,143.73	**2,927,518.41**

Source: Estimations based on EMOP (2013-2020) and the National Accounts (2012-2020)

However, the employment potential is relatively low for mining activities (1.91%), hotels and restaurants (1.50%) and electricity and gas production (1.43%). It varies between 0.14% for the activities of the production and distribution of water and sanitation and 0.80% for construction activities. However, the estimated employment potential is negative in branches of public administration (0.11%), followed by information and communication activities (0.17%) and financial and insurance activities (-1.45%).

When one examines the distribution of employment potential for women according to the various branches of economic activity, it becomes evident that the majority of jobs that have been created for women are in the trade (54.07%) and agriculture (46.74%) branches of activity. The mean percentage share of the employment potential for women ranges from 0.02% for the production and distribution of water and sanitation services, to 2.49% for the hotel and restaurant branches of activity. The mean percentage share is negative for the other branches of economic activity. These include insurance and finance (-0.08%), information and communication (-0.09%), and other activities of public administration (0.69%).

An examination of the distribution of youth employment potential according to the various branches of economic activity demonstrates that the potential is in the agricultural branches of activity (52.27%) and trade (42.35%). They are followed by transport and warehousing (3.91%), mining (2.25%), electricity and gas production (1.78%), hotels and restaurants (1.54%), construction (0.80%), other service activities that have not been classified elsewhere (0.31%), and the production and distribution of water and sanitation (0.14%). The percentage share of jobs for the youth is negative in the other branches of economic activity, notably financial and insurance activities (-0.11%), information and communication (-0.17%) and public administration activities (-1.07%).

4. Conclusion and recommendations

Conclusion

The objective of this study is to examine the sectors and the branches of economic activity in Mali that have the highest potential for the creation of employment for women and the youth.

The results demonstrate that it is the primary and tertiary sectors that have made a relatively higher contribution to formation and the variation in the percentages of Mali's GDP over the period 2012-2020. However, it is evident that it is the tertiary sector that has made the greatest contribution to GDP growth over this period. The tertiary and primary sectors seem to have the highest potential for employment creation for women and the youth. There is a higher presence of women in those two sectors compared to the industrial sector. In regard to the branches of activity, the results demonstrate that women are adequately, if not very well represented in trade activities, arts, sports, and recreation; artisanal activities; special domestic activities; accommodation and restaurants and healthcare and social welfare activities. These branches of activity thus provide employment opportunities for women.

The phenomenon of unemployment and the situation of precarious and vulnerable jobs have a higher impact of women, youth aged between 15 and 35 years, illiterate people, and those living in urban areas. Inequalities in regard to access to working opportunities by women are present and persistent in all sectors of Mali's economy. However, it is clear that those inequalities are more significant in the industrial sector, than they are in other sectors. When one takes the branch of economic activity into consideration, one observes that inequalities in access to working opportunities has a high, or even very high impact upon women in 14 out of 21 branches of activity in Mali. Inequalities have a high or even very high impact on the youth in 7 out of 21 branches of economic activity, and this affects young women more than it does young men.

An examination of the results on employment potential shows that 9 out of 13 branches of activity have the potential for employment creation for women and youth aged between 15 and 35 years. However, it is evident that the level of employment potential in the various branches of activity varies according to the branches. It is relatively higher in the agricultural branch of activity and that of trade. It is, however, inexistent in the finance and insurance, information and communication and public administration branches of activity.

An examination of the obstacles reveals that difficulties related to finding a job for youth and women could arise from factors related both to the supply and the demand of labour. On the demand side, it is evident that lack of access to financing, political instability, practices in the informal sector and access to electricity are the factors that are cited as the main barriers to investment by a significant number of firms in the industrial and services sectors. Barriers to working opportunities for firms indirectly affect their employment demand in the economy, thus preventing or promoting their investment or expansion decisions. Regarding the barriers to working opportunities for the employment of women and the youth as is observed by the labour suppliers, and the stakeholders concerned with formulating and implementing Mali's employment policy, or the civil society, several obstacles and opportunities are given. The barriers are basically those of a technical, social, political institutional and economic nature. Opportunities are such as the availability of partners to invest in the training of women and youth to facilitate their socio-professional insertion. There are also training programmes and professional internships for as well as the reinsertion of descolarized young girls. Other means of support exist such as help in business creation and the support in the empowerment of women as well as the development of specific programmes targeted towards women and the youth.

Recommendations

The results suggest that the efficiency of employment policies for the youth and women in Mali could benefit from introduction of programmes and instruments based on the specificities of the economic sectors/ branches of activity, regions, types of actors and the nature of barriers faced. An implementation of these specificities could be undertaken using the strategy elaborated in Annex 4. Regarding the input needed from Mali's government, and its development partners, the results indicate that:

- Public policy in Mali for the fight against inequalities in access to employment should be targeted towards youth and women and more specifically those who are illiterate and live in urban areas. For example, such public intervention could translate to the professional training of women and youth, their education and keeping them in school, at least until they complete their secondary school level of education, etc.

- Policy interventions are necessary in all the sectors of Mali's economy to fully achieve equality in access to employment for women and the youth. Nevertheless, public policies that aim to fight against inequalities in access to employment could focus more on barriers linked to the insertion of women in the industrial sector.

- Measures targeted towards promoting investment and employment creation in the services sector could focus more on political stability, the fight against corruption, and the practice of unfair competition from informal businesses.

However, they could effectively promote investment opportunities and the creation of employment in the industrial sector by improving electricity supply. Nevertheless, policies that ease access to financing could prove to be quite useful in the two economic sectors.

- Interventions in favour of equal access by women and the youth to working opportunities could be efficient when they are targeted towards the reduction or suppression of barriers related to the insertion of women and youth in at least 14 out of 21 branches of economic activities in Mali. Nevertheless, support could be necessary not only for maintaining a high presence of women and youth in other branches of activity where they are adequately represented, but also to increase their income and improve their social security. Indeed, the branches of activity that employ more women unfortunately seem to be those in which informal employment with poor pay and no social security are predominant.

- In the short-term, interventions in favour of equal access by women and the youth to working opportunities could focus on the reduction or suppression of barriers related to the insertion of women and the youth in 9 of the 13 branches of economic activity that have a potential for employment creation for women and youth aged 15 to 35 years.

- In the middle or long-term, training programmes and internship programmes could help in the insertion of women and youth into the most productive sectors of activity. These include finance and insurance, information and communication, and public administration branches of activity.

Notes

1. EMOP, which stands for Modular Permanent Household Survey, is a survey that has been carried out annually since April 2011, in four phases, with each phase involving three months of data collection. It provides data on demographics, accommodation, education, health, employment, food security, consumption expenditure, etc.

2. For example, the massive and irregular migration of youth, the enrolment by youth into armed terrorist organizations and/or rebel groups, etc.

3. Ministry for the Advancement of Women, the Child, and the Family (MPFEF) (2009). The National Gender Policy (PNG). Mali, Bamako.

4. Regarding employment, the structures involved include the National Employment Bureau (DNE); National Bureau of Vocational Training (DNFP); National Agency for the Advancement of Employment (ANFPE); National Funds for the support of vocational training and apprenticeship (FAFPA); Revolving Fund for Employment (FARE); National Agency for the Advancement of Youth Employment (APEJ); National Fund for Youth Employment (FNEJ); National Observatory for Employment and Training (ONEF); National Institute of Engineering and Professional Training (INIFORP). Policy instruments and programmes include among others: Youth employment tax incentive, Youth Employment Programme I and II (PEJ); Vocational training tax; and Adoption of the African union's Employment Action Plan. Regarding the implementation of specific programmes and actions dedicated to the advancement of women and gender equality, the Commission for the advancement of women in 1993, and the Ministry for the Advancement of Women, the Child, and the Family (MPFEF), in 1997.

5. These probabilities are calculated from the historical data base on the employment structure from 2013 to 2020. They correspond to the mean percentage share of each of the characteristics.

6. EMOP is a permanent survey undertaken by Mali's National Institute of Statistics (INSTAT) with the support of the Swedish International Development Agency (SIDA). Its objective is to provide up to date information on indicators of living conditions for Mali's population. It began in 2011 and the last series took place in 2020.

7. The annual fluctuations in these branches of activities are also as significant as those in the first two branches of activity in the tertiary sector, which implies a low sustainability over time regarding their respective performances.

8. With a relatively high year to year variation, that somehow slightly does away with any significance to the annual mean, due particularly to trade activities, which have experienced high fluctuations in their value added from year to year.

9. EMOP is a permanent survey undertaken by Mali's National Institute of Statistics (INSTAT) with the support of the Swedish International Development Agency (SIDA). Its objective is to provide up to date information on indicators of living conditions for Mali's population. It began in 2011 and the last series took place in 2020.

10. Vulnerable jobs are held by those workers who are self-employed and working as domestic helps.

11. Precarious jobs are those held by casual labourers, seasonal, and temporary workers.

12. The statistics given are relative to the respective weight of each category of the working age population in Mali. Indeed, these socio-demographic categories are all also relatively significant within Mali's overall population.

13. https://databank.worldbank.org/source/jobs?savedlg=1&l=en,en

14. The services sector includes wholesale and retail business, restaurants and hotels, transport, warehousing and communications, finance, insurance, real estate and trade and business services, and collective, social and personnel services that conform to divisions 6-9 (CITI Rev 2), or to categories G-Q (CITI Rev 3) or to categories G-U (CITI Rev 4).

15. The agricultural sector includes agricultural activities, hunting, forestry, fishing, in conformity with division 1 (CITI Rev 2) or to categories A-B (CITI Rev 3) or to category A (CITI Rev 4).

16. The industrial sector includes mines and quarries, the manufacturing industry, construction, and public services (electricity, gas, and water), in conformity with divisions 2-5 (CITI Rev 2) or to categories C-F (CITI Rev 3) or to categories B-F (CITI 4).

17. This is the age group given by the African union, otherwise Mali gives the age group as 15-40 years of age, whereas the International Labour Organization gives it as 15-24 years.

18. The survey data giving information on the firms is available on the World Bank's website: https://www.enterprisesurveys.org/en/data/exploreeconomies/2016/. They provide information on the barriers faced by 185 firms in Mali's private sector. They cover firms in the industrial and services sectors.

19. The data, including the number of observations and the standard deviation are presented in Annex 2.

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21. Ministry for Employment and Vocational Training. (MEFP) (2014). The National Employment Policy General Secretariat Mali, Bamako.

22. Ministry for the Advancement of Women, the Child, and the Family (MPFEF) (2009). The National Gender Policy Mali, Bamako.

23. The probabilities are calculated from the historical presentation of employment listed from 2013 to 2020. They correspond to the average share of each of the branches of economic activity.

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Annexes

Annex 1: List of sectors and branches of economic activity

Sector	Branch of economic activities
Primary	Agriculture
	Mining
Secondary	Manufacturing
	Production and Distribution of Water, Sanitation,
	Production and Distribution of Electricity and Gas
	Construction
Tertiary	Trade
	Transport and Warehousing
	Hotels and Accommodation
	Information and Communication
	Financial and Insurance Activities
	Real Estate Activities
	Specialized, Scientific and Technical Activities
	Business Support Services
	Public Administration Activities
	Teaching
	Human Health and Social Welfare Services
	Art, Sports, and Recreation Activities
	Other Service Activities that have not been Classified Elsewhere
	Special Household Activities
	Activities of Extraterritorial Organizations

Annex 2: Distribution per sector of factors that are perceived by enterprises as being their main obstacles (as a %)

| Year	Sector	Statistics	Access to financing	Access to land	Obtaining a business licence and permit	Corruption	Courts	Crime, theft, and disorder	Customs and trade regulations
2007	Industrial	Mean	21.3	5.3	1	3.2	0	0.3	0.5
2007	Industrial	Standard deviation	2.7	1.6	0.7	1.2	0	0.3	0.6
2007	Industrial	Number of firms	301	301	301	301	301	301	301
2007	Services	Mean	27.5	5.8	1.3	2.4	0	1.2	2.1
2007	Services	Standard deviation	3.8	1.9	0.8	1.3	0	0.7	1
2007	Services	Number of firms	189	189	189	189	189	189	189
2010	Industrial	Mean	55.1	2.8	0.4	0.4	0.7	0.7	2.7
2010	Industrial	Standard deviation	6.1	1.3	0.4	0.4	0.5	0.6	1.1
2010	Industrial	Number of firms	152	152	152	152	152	152	152
2010	Services	Mean	36.4	8.3	0.9	6.9	1.7	4	3.8
2010	Services	Standard deviation	5.5	3.5	0.6	3	0.9	2.8	2.2
2010	Services	Number of firms	184	184	184	184	184	184	184
2016	Industrial	Mean	20.9	3.6	0	7.8	2.3	0	4.3
2016	Industrial	Standard deviation	5.2	2.7	0	3.4	1.6	0	2.1
2016	Industrial	Number of firms	99	99	99	99	99	99	99
2016	Services	Mean	19.6	0	0.3	18.8	0.5	1.7	2.6
2016	Services	Standard deviation	6.2	0	0.3	6.3	0.6	1.4	1.4
2016	Services	Number of firms	86	86	86	86	86	86	86

Annex 2 continued

Year	Sector	Statistics	Access to electricity	Lack of qualified labour	Regulations in the labour market	Political instability	Practices in the informal sector	Administration of duties and taxes	Tax rates	Transport
2007	Industrial	Mean	30.1	1.3	0	0	13.2	5.9	15.5	2.3
2007	Industrial	Standard deviation	3	0.9	0	0	2.2	1.5	2.4	1
2007	Industrial	Number of firms	301	301	301	301	301	301	301	301
2007	Services	Mean	26.9	0	0	0	6.8	7.8	14.3	3.9
2007	Services	Standard deviation	4	0	0	0	2.2	2.3	3	1.6
2007	Services	Number of firms	189	189	189	189	189	189	189	189
2010	Industrial	Mean	15	0.4	0.4	0.4	11.4	6.7	2.4	0.7
2010	Industrial	Standard deviation	4.5	0.5	0.4	0.4	4.2	3.2	1.1	0.5
2010	Industrial	Number of firms	152	152	152	152	152	152	152	152
2010	Services	Mean	3.3	0	1.3	2.4	15.1	10.6	4.2	1
2010	Services	Standard deviation	1.1	0	0.8	2.1	4.4	3.6	2.2	0.7
2010	Services	Number of firms	184	184	184	184	184	184	184	184
2016	Industrial	Mean	15.4	1.1	5.9	18.7	12.9	3	1	3
2016	Industrial	Standard deviation	4.4	1.3	2.3	4.7	3.7	2.3	1.2	2.9
2016	Industrial	Number of firms	99	99	99	99	99	99	99	99
2016	Services	Mean	4.3	0.5	2.5	24.8	17.8	1.5	0.5	4.7
2016	Services	Standard deviation	3.4	0.6	1.5	7.2	10.2	1.3	0.5	2.4
2016	Services	Number of firms	86	86	86	86	86	86	86	86

Source: World Bank

Annex 3: An estimation of the stochastic frontier model with inefficiency in the sectors explained using the variables of sex, age group, level of education and area of residence

```
Stoc. frontier normal/half-normal model      Number of obs    =        59
                                              Wald chi2(2)     =    801.82
Log likelihood =  -35.75013                   Prob > chi2      =    0.0000
```

lproductenmlard	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
lproductenmlard						
ltotal	.5492156	.032988	16.65	0.000	.4845603	.6138709
lcoutcapital	.0290447	.0027944	10.39	0.000	.0235678	.0345216
_cons	-1.458272	.4493341	-3.25	0.001	-2.338951	-.5775938
lnsig2v						
lhomme	-3.193612	2.432047	-1.31	0.189	-7.960337	1.573112
lfemme	.3675239	.2783705	1.32	0.187	-.1780724	.9131201
lage1524ans	-2.722392	.9886664	-2.75	0.006	-4.660143	-.7846416
lage2535ans	1.735018	1.742031	1.00	0.319	-1.6793	5.149337
lage3664ans	-.3819129	1.953106	-0.20	0.845	-4.20993	3.446104
lage65ansetplus	.0576335	.3250036	0.18	0.859	-.579362	.6946289
lurbain	1.237273	1.671668	0.74	0.459	-2.039137	4.513682
lrural	.5742174	1.401811	0.41	0.682	-2.173282	3.321717
laucunniveau	.0101771	1.40323	0.01	0.994	-2.740102	2.760456
lfondamental	1.907196	2.185527	0.87	0.383	-2.376359	6.190751
lsecondaire	-.7739373	.6840662	-1.13	0.258	-2.114682	.5668079
lsupérieur	-.1525376	.3663155	-0.42	0.677	-.8705027	.5654275
_cons	11.78826	7.121928	1.66	0.098	-2.17046	25.74699
lnsig2u						
_cons	-22.33441	3444.104	-0.01	0.995	-6772.654	6727.985
sigma_u	.0000141	.0243327			0	.

Annex 4: Intervention strategies to address the challenges to the employment of youth and women in Mali

Annex 5: Interview guide for key informant

Interview guide on the obstacles and opportunities to the employment of women and the youth
The employment potential of women and the youth in Mali's economic sectors and sub-sectors
-Version of 07 July 2021-

Module 0. Identification of respondent

Q001	Guide number	|_|_|_|_|_|
Q002	**Name and surname of respondent**	....
Q003	**Sex of respondent** *1= Woman* *2= Man*	|_|
Q004	**Age of respondent**	|_|_|
Q005	**Level of education** *0= Illiterate* *1= Basic* *2= Secondary* *3= Tertiary*	|_|
Q008	**Sector of activity** *1= Agriculture* *2= Trade* *3= Processing* *4= Hotels/ restaurants* *5= Education* *6= Transport* *99= Other*	|_|_|
Q009	**Employer** *1= Public administration* *2= Private* *3= Self-employed* *98= **Not applicable***	|_|_|
Q010	**Telephone number of respondent**	|_|_|_|_|_|_|_|_|
Q011	**Date of survey**	|_|_| dd |_|_| mm |_|_|_|_| yyyy
Q012	**Supervisor**	|_|_|

continued next page

Module 0 Continued

		Q013	aInterviewer	
Q006	**Religion** *1= Traditional religion or animist* *2= Christian* *3= Muslim* *4= Other religion*		_|_|_|	
Q007	**Employment status** *1= Employed* *2= Unemployed* *3= Inactive*			

Module 1. Identification of the obstacles and opportunities in the employment of women and the youth in Mali

Q101. According to you, are there obstacles to the employment of WOMEN and/or YOUTH in Mali? And which are the sectors of activities in which WOMEN and/or the YOUTH would find the greatest difficulties in obtaining a job?

    R104: _____

Q102. Could you explain why [*for example, lack of education, experience or competencies, lack of time, family burdens/responsibilities, limited mobility, lack of social networks or relations, lack of access to production equipment and financial resources, low wages, social norms (religious and cultural) and institutional/ legal norms, political instability, insecurity, etc.*]. WOMEN do not have as much access to employment as men in Mali?

    R102: _____

Q103. In what manner, according to you, is it possible to eliminate these obstacles to the employment of WOMEN in Mali?

    R103: _____

Q104. Could you explain why [For example, the lack of education, experience and competencies, lack of time, family burdens/responsibilities, limited mobility, lack of social networks or relations, lack of access to production equipment and financial resources, low wage rates, social norms (religious and cultural) and institutional/legal norms, political instability, insecurity, etc] the YOUTH do not have as much access to employment as adults in Mali?

    R104: _____

Q105. In what manner, according to you, is it possible to eliminate these barriers to YOUTH employment in Mali?

    R105: _____

Q106. How would you describe the employment situation of WOMEN and the YOUTH in Mali over the 3 years to come? Please explain whether the sectors of activities could play a specific role.

    R106: _____

Q107. Could you state the main reasons that justify your response in regard to the prospects of employment for WOMEN and the YOUTH in Mali over the next 3 years?

    R107: _____

Q108. According to you, are there measures in place in Mali to facilitate the employment of WOMEN and the YOUTH? If yes, which are the measures?

    R108: _____

Mission

To strengthen local capacity for conducting independent,
rigorous inquiry into the problems facing the management of economies in sub-
Saharan Africa.

The mission rests on two basic premises: that development is more likely to
occur where there is sustained sound management of the economy, and that such
management is more likely to happen where there is an active, well-informed group of
locally based professional economists to conduct policy-relevant research.

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