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SIFA
Skills Initiative for Africa

Labour Market and Sector Analysis:

Baseline Study for Cameroon, Ethiopia, Ghana, Nigeria, Togo, and Tunisia

REPORT: CAMEROON

ENGLISH

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AUTHOR

Michele Capazario; Amanda Jitsing; Lauralyn Kaziboni; Tshepo Mokoka; Fouche Venter

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1 Introduction

The Skills Initiative for Africa (SIFA) is an initiative of the African Union Commission (AUC) and the African Union Development Agency (AUDA-NEPAD) supported by the German Government and the European Union. SIFA promotes occupation prospects of young Africans through the support of innovative skills development programmes and close cooperation with the private sector as an integral key stakeholder in the creation of jobs.

In line with this, GIZ has tasked DNA Economics to come up with a methodology to prioritize various sub-sectors across 8 African countries[1]. This is done to assist the Skills Initiative for Africa (SIFA), who require information regarding the direction and extent of their investment and financing in prioritized sectors, wich themselves have a specific focus on technical and vocational training students, and graduates, across various countries. Moreover, it informs decision making on future skills development initiatives of the respective AU Member states.

This research started prior to COVID-19. Of course, COVID-19 is likely to have a large impact on most, if not all, of the economies across the globe. Accordingly, this pre-COVID-19 methodology was then adapted to ensure that a COVID-19-scenario analysis was completed, looking at the potential recessionary impact of the pandemic across the various sub-sectors within the countries of choice.

Given this backdrop, the current report seeks to explain the methodology followed by DNA Economics in order to obtain reasonable forecasts for sub-sectoral employment and GDP trends with very tight data constraints. This methodology, while somewhat naïve in a sense, provides an indication of which sub-sectors will be worst affected across countries, without any up-to-date macroeconomic data.

As such, the report first sets out a methodology brief, before providing some context to the Cameroonian economy. This is followed by a forecast analysis, and concludes with a ranking of every sub-sector based on the indicators set out in the methodology.

[1]Cameroon, Ethiopia, Ghana, Kenya, Nigeria, South Africa, Togo and Tunisia

2 Methodology Brief

As best as possible, this methodology aims to answer the following question:

> "Which 3 sub-sectors would benefit most from a skills development intervention aimed at improving labour market prospects for those entering those sub-sectors?"

When defining which sub-sectors would benefit the most, we focused on a handful of indicators:

Table 1: Indicators Used to Analyse Sectoral Labour Demand

Statistical Indicators
Historical employment and real GDP growth per sub-sector
COVID-19-corrected employment and real GDP growth forecasts per sub-sector
Historical, and forecasted contributions of each sub-sector to national GDP and national employment
Employment-GDP elasticities (i.e., by how much does employment change if real GDP in a sector changes)
The length of time before the COVID-19 economic shock dissipates per sub-sector
The gender equality in employment prospects for each sector
Qualitative/Literature-Based Indicators
A sub-sector's prevalence in the literature as a government/donor agency priority
A sub-sector's perceived susceptibility to COVID-19 as found in research

Because some of these indicators were qualitative, and some are statistical in nature, it would have been arbitrary to combine them without using a statistical technique which corrects for:

1. The relationship between each variable (for instance, real GDP and employment are positively related),
2. The relationship between the same variable over time (real GDP growth in a previous year often pushes up real GDP growth in the current year due to inertia), and
3. What each variable is measured as (combining a % growth rate with the number of years it would take to recover, and so forth).

As such, Principal Components Analysis (PCA) appeared to be most suited to the analysis, and was used to combine the indicators into an index of prioritization.

While historical indicators were easy enough to calculate, and while qualitative analysis was easy enough to conduct, the forecasting method was perhaps most difficult. Due to the scarcity of data (only having data available in yearly format for all sub-sectors from between 2008 to 2018/19), the forecast method chosen needed to be able to work well with small samples. In order to do this, a truly mixed-methods[2], the technical team chose to follow the methodology outlined below:

[2]Using quantitative information to inform/mix with qualitative analysis, and/or vice versa, simultaneously

Box 1: Brief Summary of Forecast Methodology

1

Use literature (Ehlen 2007, for example) to assess the impact of pandemic influenza on national and sub-sectoral economic growth

↓

Economic growth is expected to decline by 2% in the best-case scenario, and 6% in the worst-case scenario in the year of the pandemic, before smoothing over time

2

From this, forecast national and sub-sectoral real GDP growth until 2024 using a Structural Vector Autoregression (SVAR)

3

Assess the relationship between changes in real GDP and Employment (Mistra and Suresh 2014) at a national and sub-sectoral level. Use these relationships to forecast employment changes given forecasted changes to national and sub-sectoral GDP in step 2

For more information on this methodology, contact Michele Capazario (michele.capazario@dnaeconomics.com)

In short, every scenario of economic decline between 2 and 6% is modelled for at a national level. Using the SVAR, these scenarios are translated into sub-sectoral changes in real GDP, whilst also forecasting how long it would take for each sub-sector to recover to pre-COVID-19 levels. These are then weighted by employment-output elasticities for each sub-sector to understand the extent to which employment in each sub-sector would taper off.

This was followed by a wide stakeholder engagement workshop, which brought together key representatives in Cameroon from the TVET and business spaces, as well as focal persons from SIFA offices within the country. These individuals all had vast expertise on elements of labour demand and labour supply within the country, and assisted in honing the findings from the quantitative analysis.

3 Country context: Cameroon

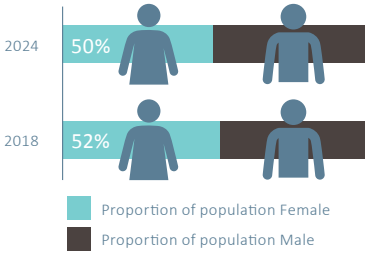
The backdrop for the Cameroon economy is set up in the following sub-sections. First, we provide a country fact sheet which summarizes some stylized facts about Cameroon's economy. This is followed by a literature synthesis that assesses which of the sub-sectors within the economy are of priority as well as an assessment of the potential impact of COVID-19 on a sub-sectoral and national level, and an assessment of trade and regional integration from a Cameroonian perspective.

3.1.1 **Country Fact Sheet**

Box 2: Population, Employment, and Inequality Summary

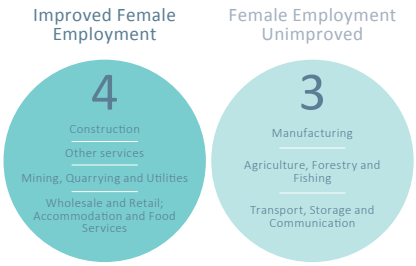
Population

- In 2018, Cameroon had a population of approximately 25 000 000.
- This is expected to increase to 25 500 000 by 2024.
- The population is split equally by gender.



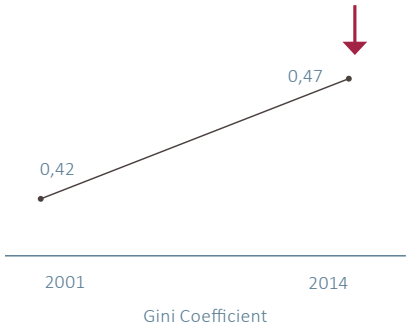
Employment

- Male unemployment: 3% in 2018.
- Female unemployment: 4% in 2018.
- Male unemployment is expected to remain constant, whilst female unemployment is forecast to increase to 5% by 2024.
- Most sub-sectors (highlighted in green) have improved in terms of gender-equitable employment over the last 15 years.



Income inequality

- Cameroon has experienced some economic progress over the last 13 years, with further room for development.
- Unfortunately, economic gain is not equally shared across classes; income inequality has worsened during the same period.



Source: Own analysis of data from The World Bank (2020)

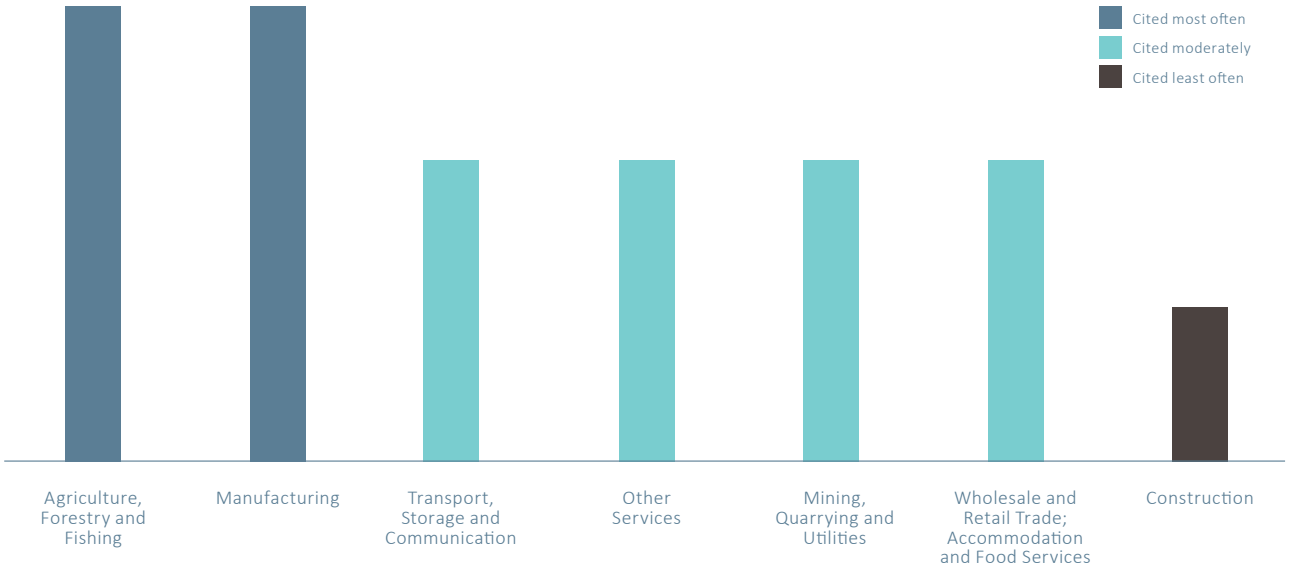
While some data is relatively out of date (specifically, as it pertains to income inequality), the context of Cameroon is one of an extremely large informal labour force (explained further into the report), implying that earnings potential for that informal labour force is very low, creating income inequality. That said, estimates of the size of the formal and informal labour force who are employed suggest that approximately 11.25 million people were employed in Cameroon in 2019. In terms of gender equitability, the 4 sectors highlighted as having a sense of improvement in female employment either employ a majority female workforce (the accommodation industry found in the other services sub-sector, whose workforce is 82% female), or have had an increasing trend of employing females over the last 10 years.

3.2 Stylized Facts from Selected Literature

3.2.1 National Strategic Priority

In order to understand the developmental path of Cameroon, it is imperative to analyse literature. This literature, as analysed below, paints some stylized facts relating to focal sub-sectors regarding state investment and general priority:

Figure 1: Sub-sector Priority across Literature Sources



Sources: (Embassy of Cameroon, 2009); (Embassy of Cameroon, 2009); (World Food Programme, 2017)

Cameroon's strategic priority, followed by both the Cameroonian vision statement, and by other strategic priority documents (most recently, the document released by the World Food Programme), can be summarized as follows:

1. Of all sub-sectors, it is clear that Cameroon and various investors are expected to focus the most on improving agricultural and manufacturing output as a means to:
   a. Improve employment by opening up opportunities to those with lower levels of qualification, and industrialize, and
   b. Improve food security and food processes within the nation.

2. Social sectors like the education and health sub-sectors are also expected to be focal in terms of funding, given the economy's relatively low-income levels, as a means to improve the livelihood of its citizens.

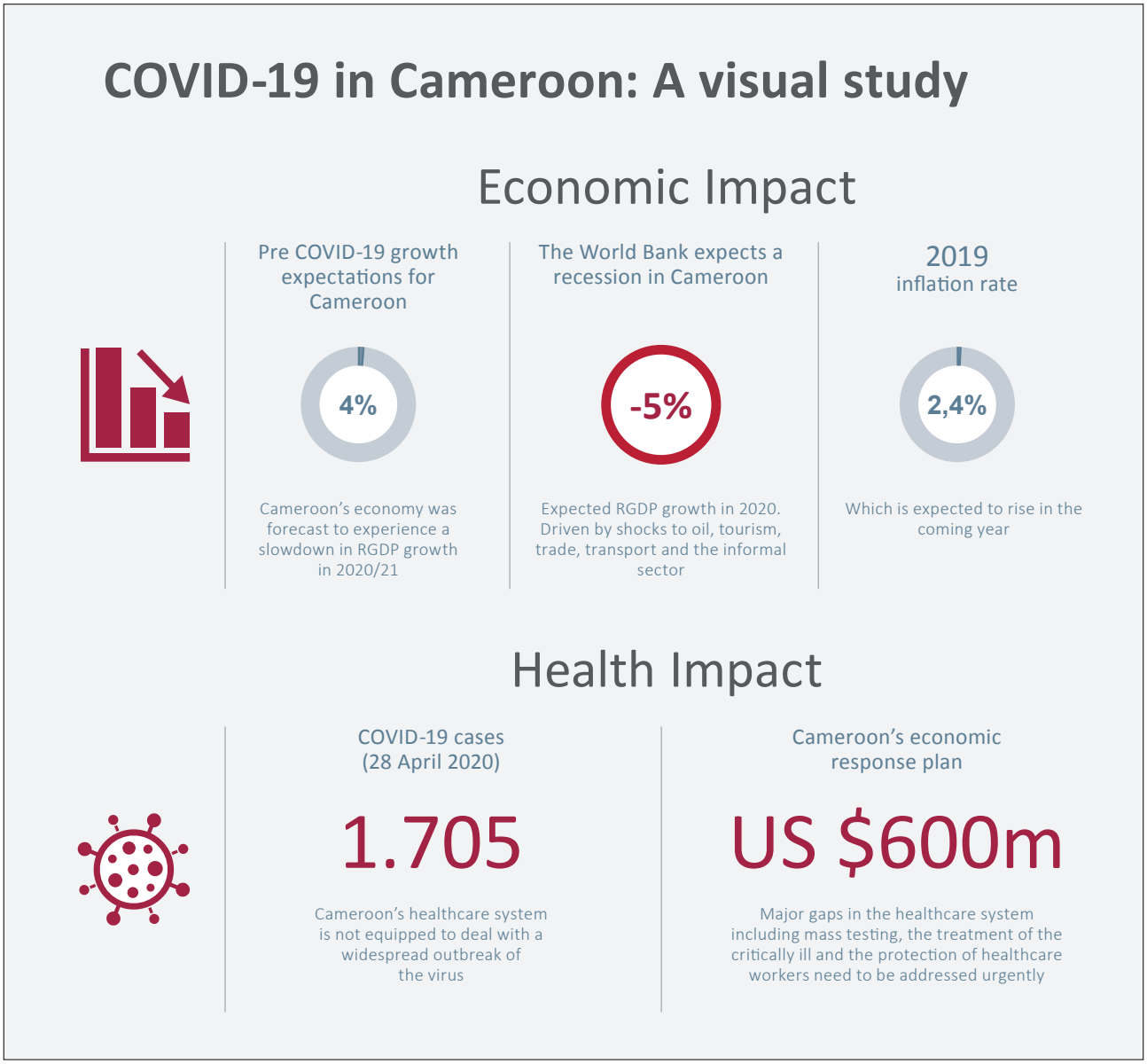
3. The vision statement for Cameroon by 2035 also includes a focus on consolidating the income status of the country. In order for this progress to be made, it is likely that the government will also focus on growing or improving the utilities sub-sector (specifically, renewables), and the ICT industry (housed in the transport, storage, and communications sub-sector).

4. Because this set of strategic plans is extremely wide, it is likely that the approach taken by the State of Cameroon will be cross-sectoral, with relatively very limited focus being placed on the construction sector.

3.2.2 **Potential Impact of COVID-19**

Because of the uncertainty surrounding COVID-19 and the extent of its economic (and health) impact, the literature analysis also brings out the potential impact that COVID-19 might have on the Cameroonian economy. This is summarized below, and is included in the analysis further on:

Box 3: Summary of the Impact of COVID-19 on Cameroon



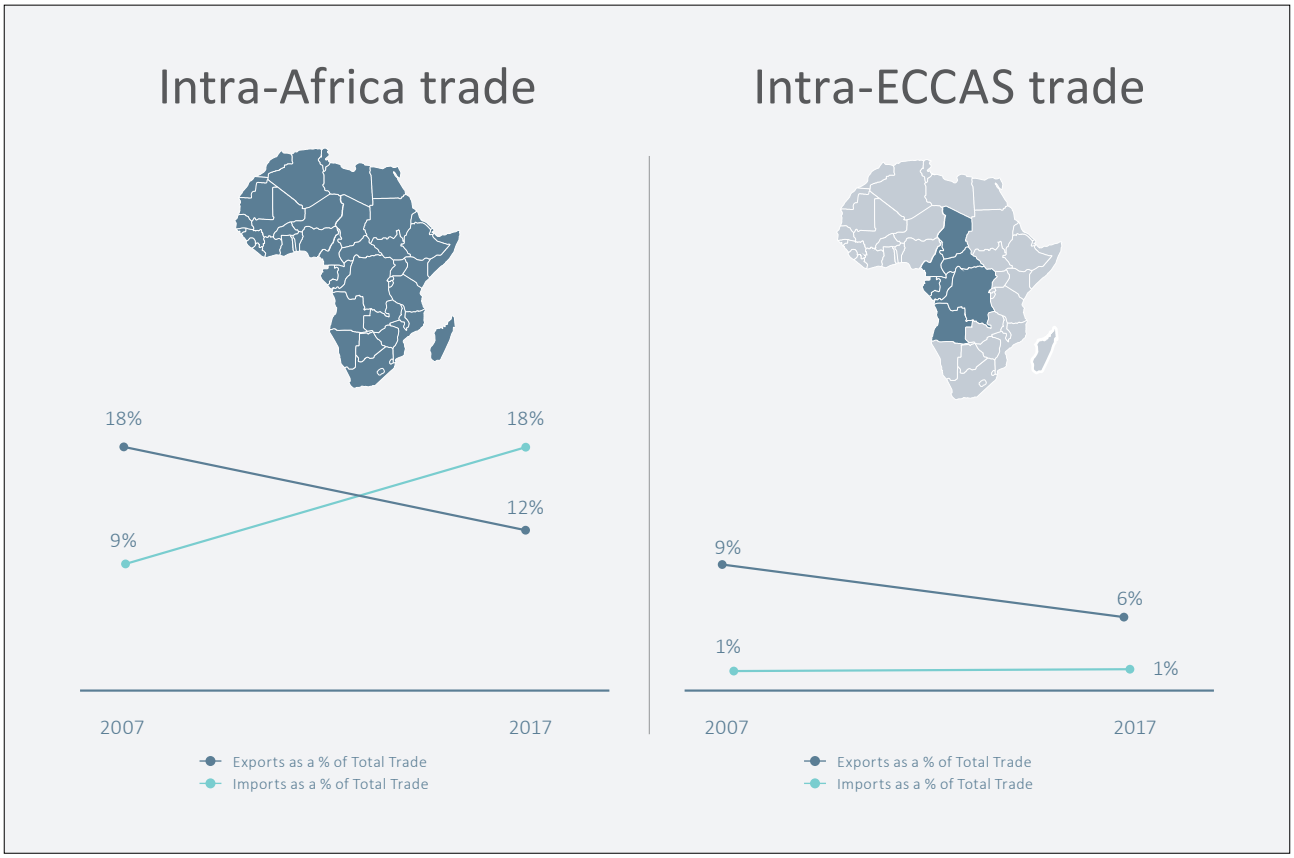
Source : (African Development Bank Group, 2020); (World Bank, 2020); (UNDP Cameroon, 2020); (Unah & Mussa, 2020)

Because there is great uncertainty regarding the economic response to COVID-19, it is likely that this information will change on a regular basis. However, this analysis does point out that COVID-19 is expected to have an extremely large impact on the Cameroonian economy, especially given its vast informal economy, and weaker than average access to medical care across, not only Cameroon, but Africa in general.

3.3 Trade and Regional Integration

Intra-Africa and Intra-ECCAS trade is summarized below:

Figure 2: Regional Integration in Cameroon across Africa and ECCAS



Source: Own analysis of data from ITC Trademap (2020)

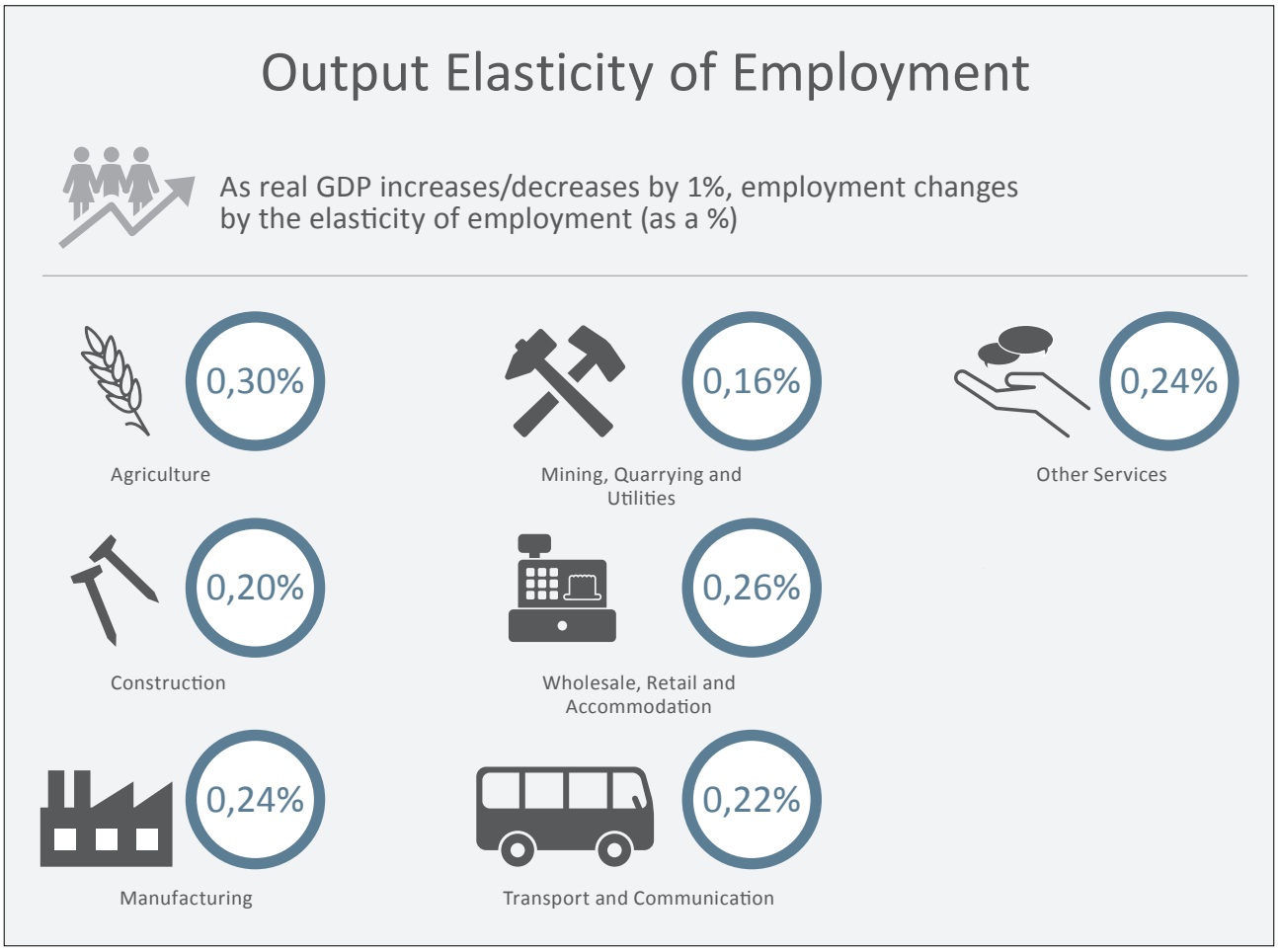
It is worth mentioning that exports from Cameroon to the rest of the world have remained volatile since 2008, but have picked up from 2016. Imports to the rest of the world, however, have been trending upwards from 2008, with a spike in 2014. More specifically, apart from imports from the whole of Africa having increased over the 10-year historical period, it is clear that trade between Cameroon and the rest of Africa has decreased over time, signalling weaker regional and continental integration.

4 Macroeconomic Analysis

4.1 Employment-Output Elasticity

In order to forecast in light of COVID-19, it is necessary to understand the relationship between real GDP and employment in order to model relatively accurate scenarios. This is best summarized by estimating the employment elasticity for each sector, as seen below:

Box 4: Output-Employment Elasticity Summary per Economic Sub-sector in Cameroon



Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

Of course, in normal circumstances, the higher the elasticity of employment, the more likely a sector is to incorporate growth into employment. However, the inverse also holds true- if an elasticity is high, then worsened economic growth theoretically translates to far worse losses in employment than if an elasticity was lower. Because this is the mechanism which assists us in modelling employment further into the report, the sectors with the highest employment elasticities are also those most susceptible to economic shocks, namely:

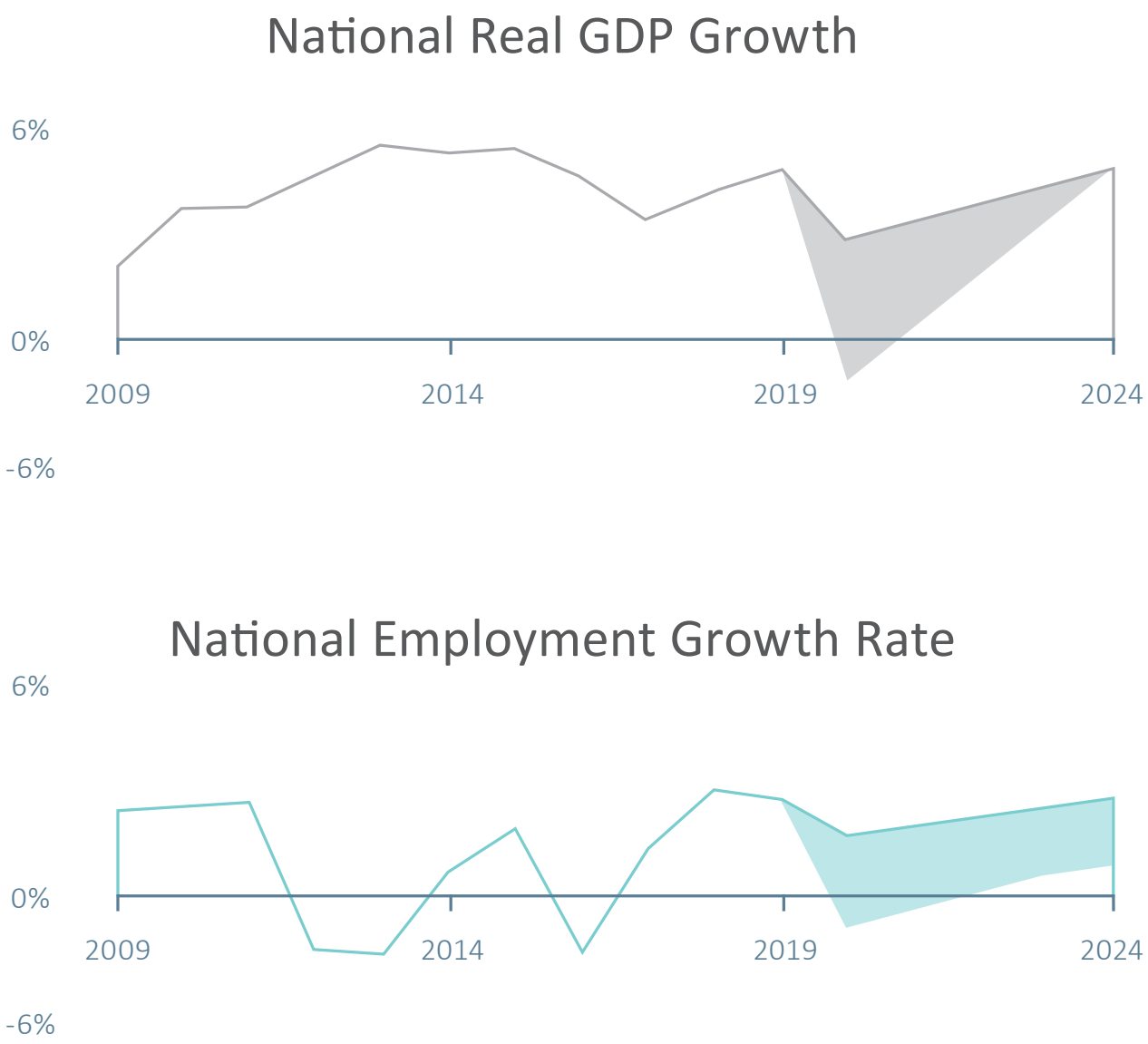
1. The agriculture sub-sector,
2. The wholesale and retail sub-sector, and
3. The manufacturing sub-sector.

On the other hand, the sector which is least susceptible to an employment shock is the mining, quarrying and utilities sub-sector on the other hand, which has an extremely low employment-output elasticity of 16%. If GDP were to decline in this sector by 1%, employment would only drop by 0.16%. It is this relationship which assists in the modelling of forecasts for employment growth and decline in the following sections.

4.2 **National**

At a national level, Cameroon has experienced strong historical economic gains of around 3-5% year-on-year. When forecasting with the impact of the COVID-19 pandemic in mind, real GDP growth is expected to slow down even further:

Figure 3: National Real GDP and Employment Forecasts for Cameroon



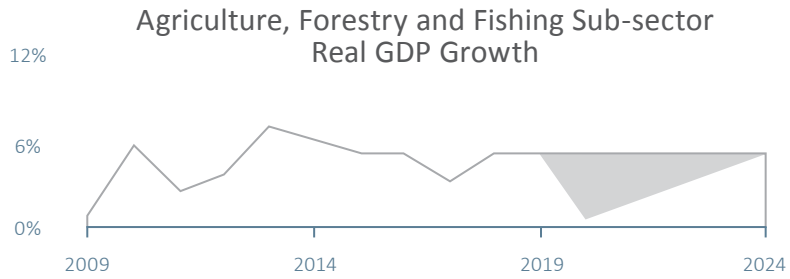
Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

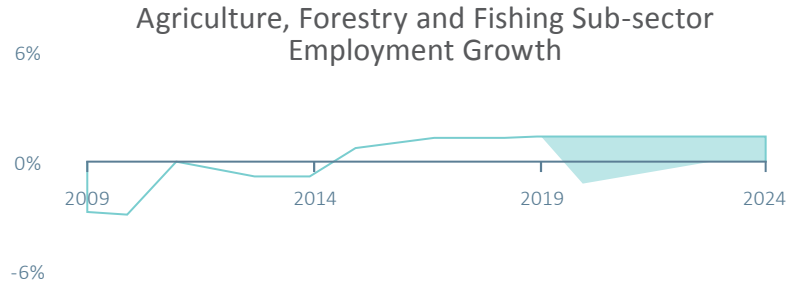
These forecasts show that:

- Due to COVID-19, the best-case scenario would be for Cameroon's growth in 2020 to hover around 2-3%, whilst recovering to 2019 levels by 2024 (or, before).
- In the worst-case scenario, Cameroon's economy would still recover fully by 2024. If this is the case, it is expected that Cameroon will recess by between 0.5 and 1% in 2020, before improving slightly over the following years.
- These scenarios translate to a forecasted decline in employment of up to 1% in 2020 (roughly 86 000 jobs in the worst-case scenario), until an expected recovery in employment growth by 2021/2022.

4.3 **Primary Sector**

Because the agriculture sector has historically been growing robustly, and because the sector will likely be leveraged as a necessity in the forecast period, the following trends emerge for Cameroon:

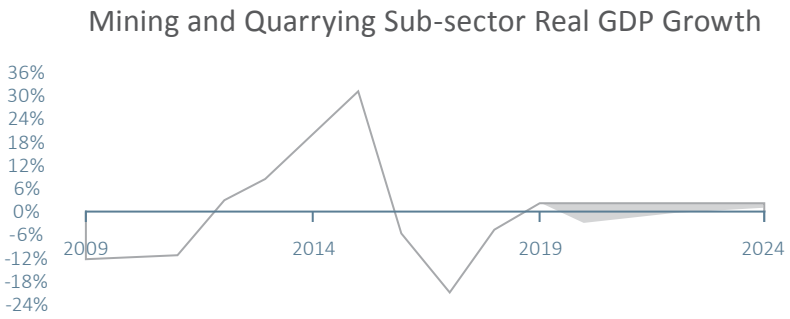


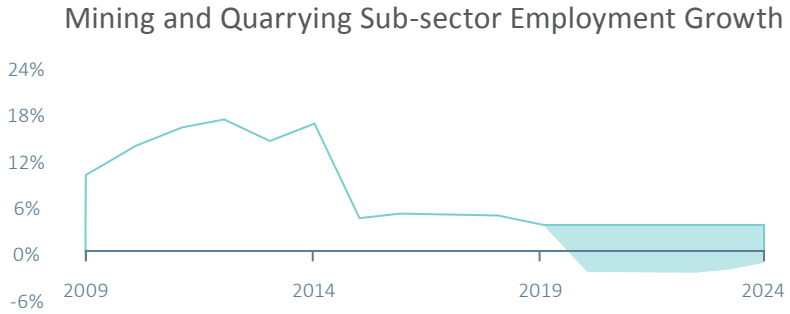


- Real GDP is expected to grow by between 4% in the best-case COVID-19 scenario in 2020, and only by 0.5% in the worst case.
- In the worst case, this translates to a decrease in employment of up to 2% (roughly 55 000 jobs) in 2020. The sector employed some 4.7 million people in 2019.
- In the worst case, the sub-sector is likely to recover to pre-COVID-19 levels by 2021, and potentially sooner in the best-case scenario.

Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

Of all sub-sectors, the Mining, Quarrying, and Utilities sub-sector has historically been most embattled and volatile. By 2018, though, growth forecasts were positive. In light of COVID-19, however, it is likely that:



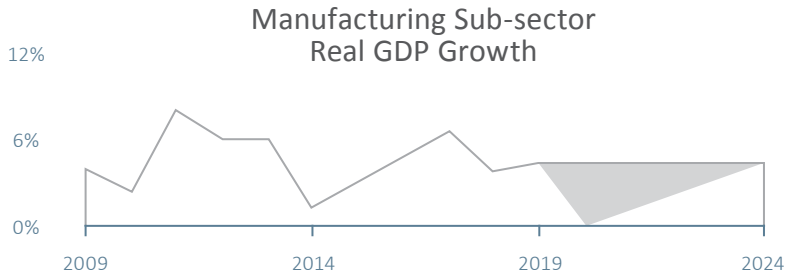


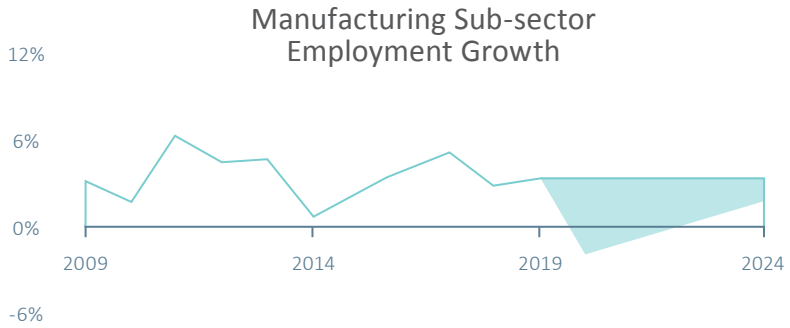
- Real GDP is expected to grow by between 0.5% in the best-case COVID-19 scenario in 2020, or decline by up to 1% in the worst case.
- This translates to a 2% decrease in employment at the most (or, a loss of 2000 jobs) in 2020. The sector has roughly 114 000 people employed in it as of 2019.
- In the worst case, the sub-sector is likely to recover slightly by 2022, before growing extremely sluggishly until 2024.

Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

4.4 **Secondary Sector**

The manufacturing sub-sector, as found in the forecast model, is expected to be affected the most, as expected in the literature. This is despite relatively strong historical gains which the forecast model points out might not be completely eroded:

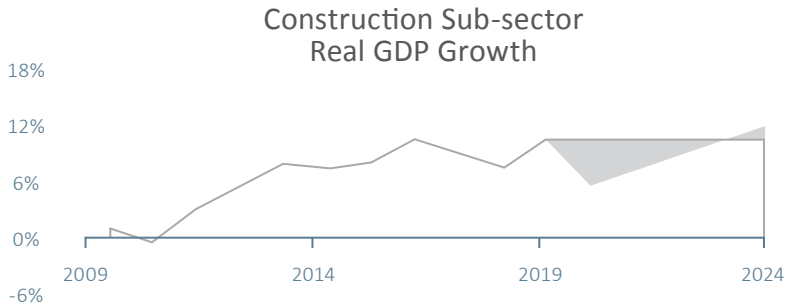


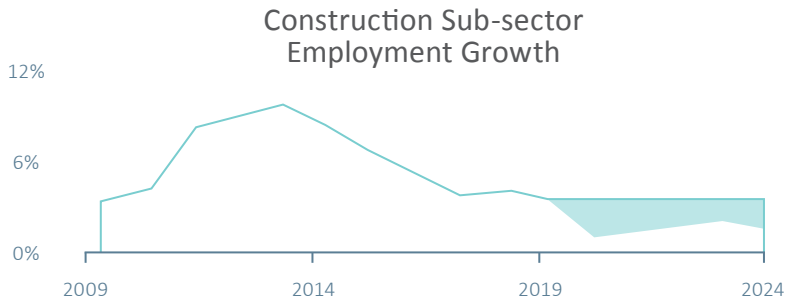


- Real GDP is expected to grow by close to 5% in the best-case COVID-19 scenario in 2020, and track 0% growth in the worst case.
- This translates to, at worst, a decline in employment for 2020 of up to 2.5% in the sector (translating roughly to the shedding of 29 000 jobs). The sector had 1.2 million people in its workforce in 2019.
- In the worst case, the manufacturing sub-sector is likely to recover slightly by 2021.

Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

Because the construction sector has been growing extremely rapidly, it is likely that the sector has sufficient padding to withstand a massive economic shock. Nevertheless:



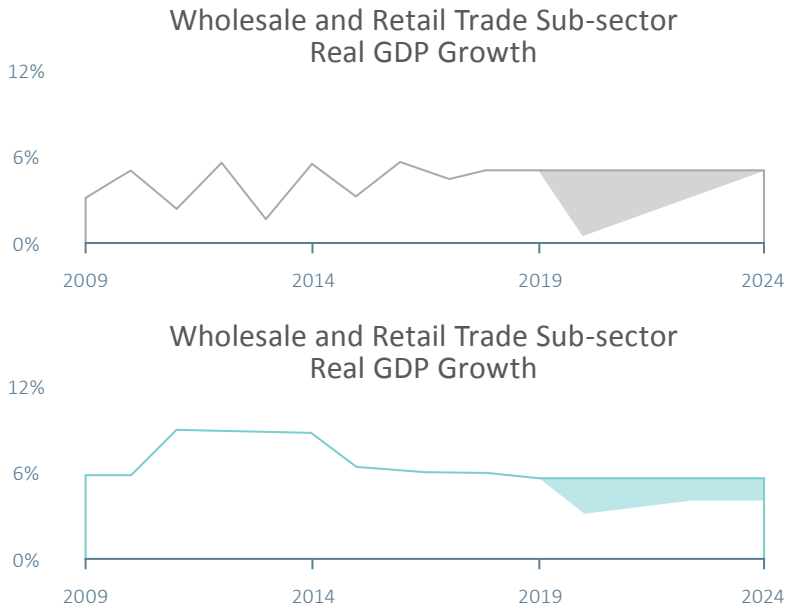


- Real GDP growth is expected to drop from historical highs of around 9% in 2019, to a worst case of 5%.
- This translates to a drop in employment growth from 5% in 2019 to between 2.5% and 4% in 2020. The sector's workforce was roughly 340 000 people in 2019.
- It is likely that the construction sector will have improved relative to 2019 by 2023/2024.

Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

4.5 **Tertiary Sector**

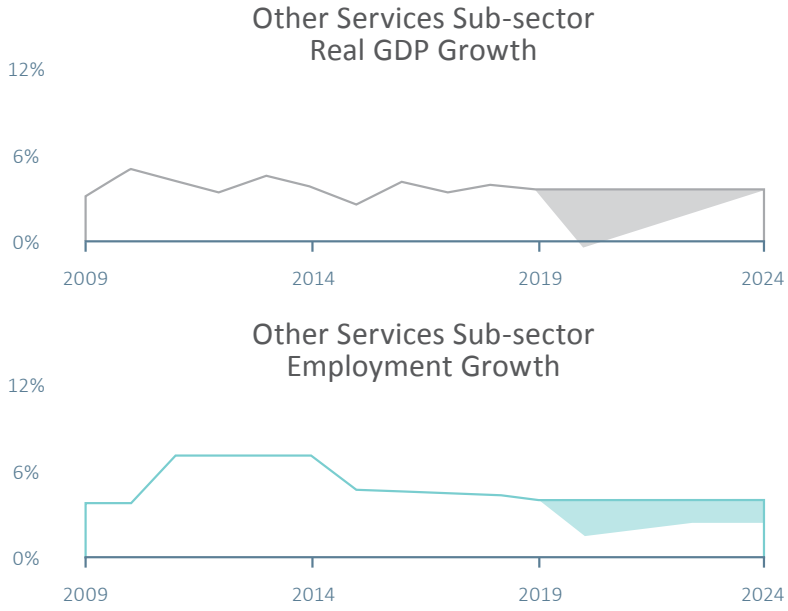
The historical gains in the wholesale and retail trade sub-sector are set to shrink post COVID-19:



- Real GDP is expected to grow by just over 0% in the worst case, despite historical growth of closer to 5%.
- This translates to a drop in employment growth from 4% in 2018/19 to around 1.5% by 2020 onwards. This is given about 1.8 million employees in 2019.
- It is, however, expected that real GDP growth will rebound to pre-COVID-19 levels by 2024, whilst employment growth will remain relatively sluggish and not pick up to pre-COVID-19 levels by 2024 according to the forecasts.

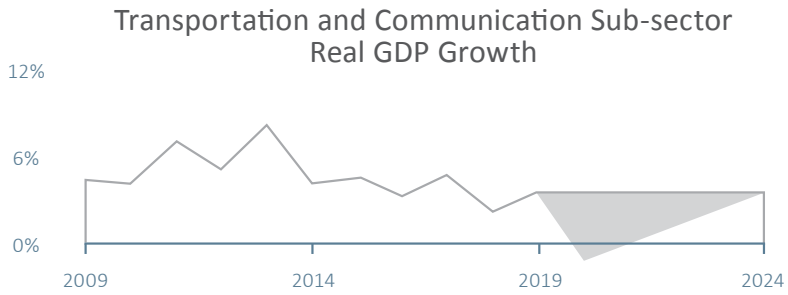
Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

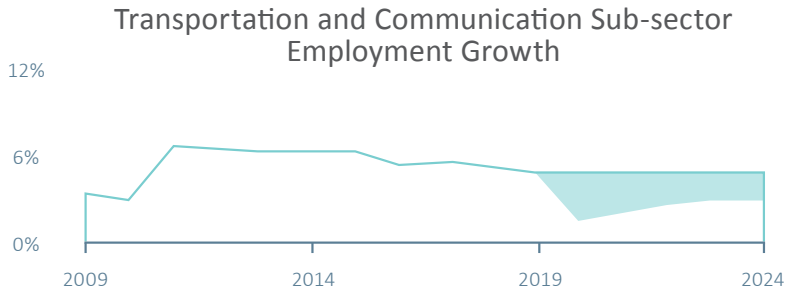
Again, due to historically solid gains, the other services sub-sector (constituting education, health, financial and rental activities, among others) will only be mildly affected:



- Real GDP is expected to decline, at worst, by 0.25% in 2020, far lower than the 5.5% growth experienced in 2018/2019.
- However, employment which was previously growing at close to 4%, is now forecast to grow by between 1 and 2% during 2020-2024. Around 2.1 million people were employed in this sector in 2019.
- It is likely that by 2023, the other services sub-sector will have rebounded completely in terms of real GDP, but not in terms of employment growth.

Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)





Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

In terms of the last sub-sector, the following trends are forecast:

- It is clear that both employment and real GDP are expected to decrease in 2020 relative to historically, although real GDP is expected to decrease by far more than employment (having previously given jobs to 700 000 Cameroonians in 2019):
  - In the best-case scenario, GDP is expected to grow by close to 3%. In the worst case, GDP decreases by close to 1%.
  - Employment is expected to decline less rapidly in comparison, from growing at 5.5% in 2018/2019, to only growing by 2% in 2020.

The sub-sector is expected to recover partially in the worst-case scenario by 2022 in terms of real GDP.

5 Labour Supply Analysis

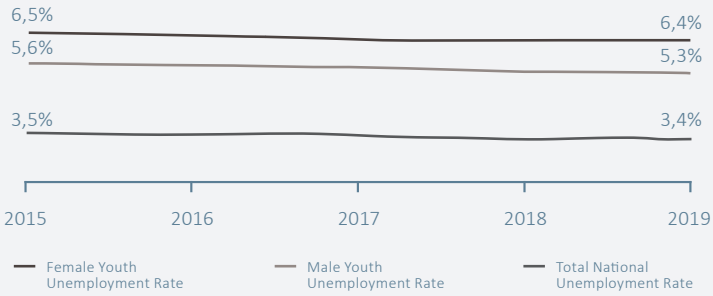
The Cameroon labour market is underdeveloped; because of this, very little research has been done regarding the labour supply within Cameroon (given the vast number of people employed in the informal sector). However, in order to match the demand for labour (pointed to in the forecasts) to the supply of labour, we use the data at our disposal to create the following infographic:

Box 5: Labour Supply Snapshot in Cameroon

Cameroon Labour Supply Analysis

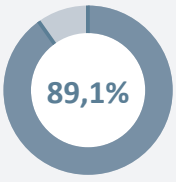
Labour Market Landscape

- The sectors which found themselves at the top of the rankings are those sectors which contribute the most to national employment (for example, the agriculture sector employed roughly 4.8 million people in 2019).
- Because of their relative size, it is possible for these sectors to absorb many more jobs in the future, given their historical ability to do so.



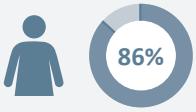
- While national unemployment is hovering around the 3.5% mark as of 2019 (and is forecast to increase due to COVID-19), youth unemployment remains higher for males (5.3%), and substantially higher for females (6.4%).
- This signals that the economy, which has employed some 11 million people, is struggling to absorb its youth.

Forms of Employment

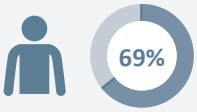


Estimate of the proportion of Cameroonians employed in the informal sector

This translates to the informal sector employing as many as 9.2 million Cameroonians out of its 11 million strong workforce



of females are self-employed

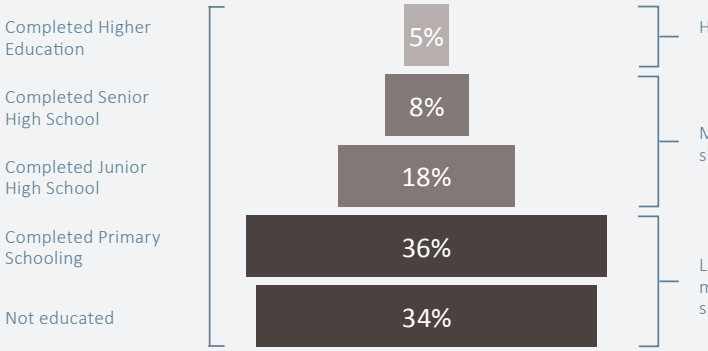


of males are self-employed

Because this employment predominantly falls in the informal sector, this signals that:

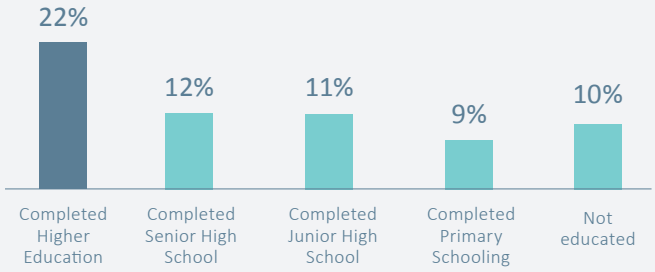
- Job security is low,
- Skills levels are usually relatively low, and
- Female employment tends to still be a pervasive issue in the country, with more women needing to work for themselves as opposed to an organization of some form.

Education and Training Profile



- In Cameroon, as of 2012, around 34% of the population had not completed any form of education
- Of the total population, approximately 70% of Cameroonians possess only low to moderate skill levels, while 5% of the population is highly skilled.

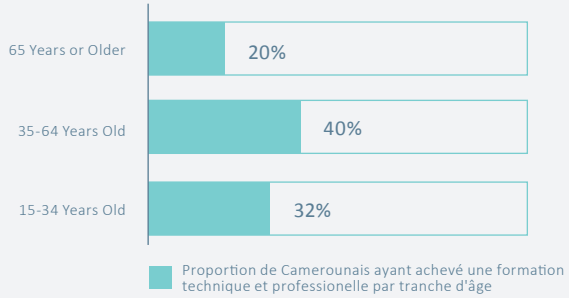
Proportion of employed Cameroonians who are Underemployed per Schooling Level



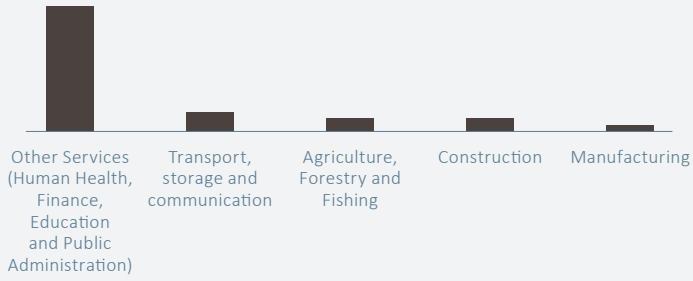
The proportion of people underemployed (ie, employed in an occupation requiring less skill than what they currently have or employed part-time when they could be employed full time) is highest in the Cameroonian population who has obtained some form of higher education.

1 in 4

The ratio of people in Cameroon who have completed some form of TVET education



Prevalence of Careers Mentioned in Critical Skills List



- Although the economy is relatively early on in its development, the critical skills list for Cameroon overwhelmingly shows that skills shortages are occurring in the health, finance, education and public administration industries (found in the 'other services' sub-sector).
- This signals that the Cameroonian economy is not able to 'home grow' these skill-sets, and as such, needs to import them from outside the country.

Source: (The ILO, 2020); (The World Bank, 2020); (Kouete, 2020); (Sosale & Majgaard, 2016); (National Institute of Statistics, 2012); (Department of State, 2009)

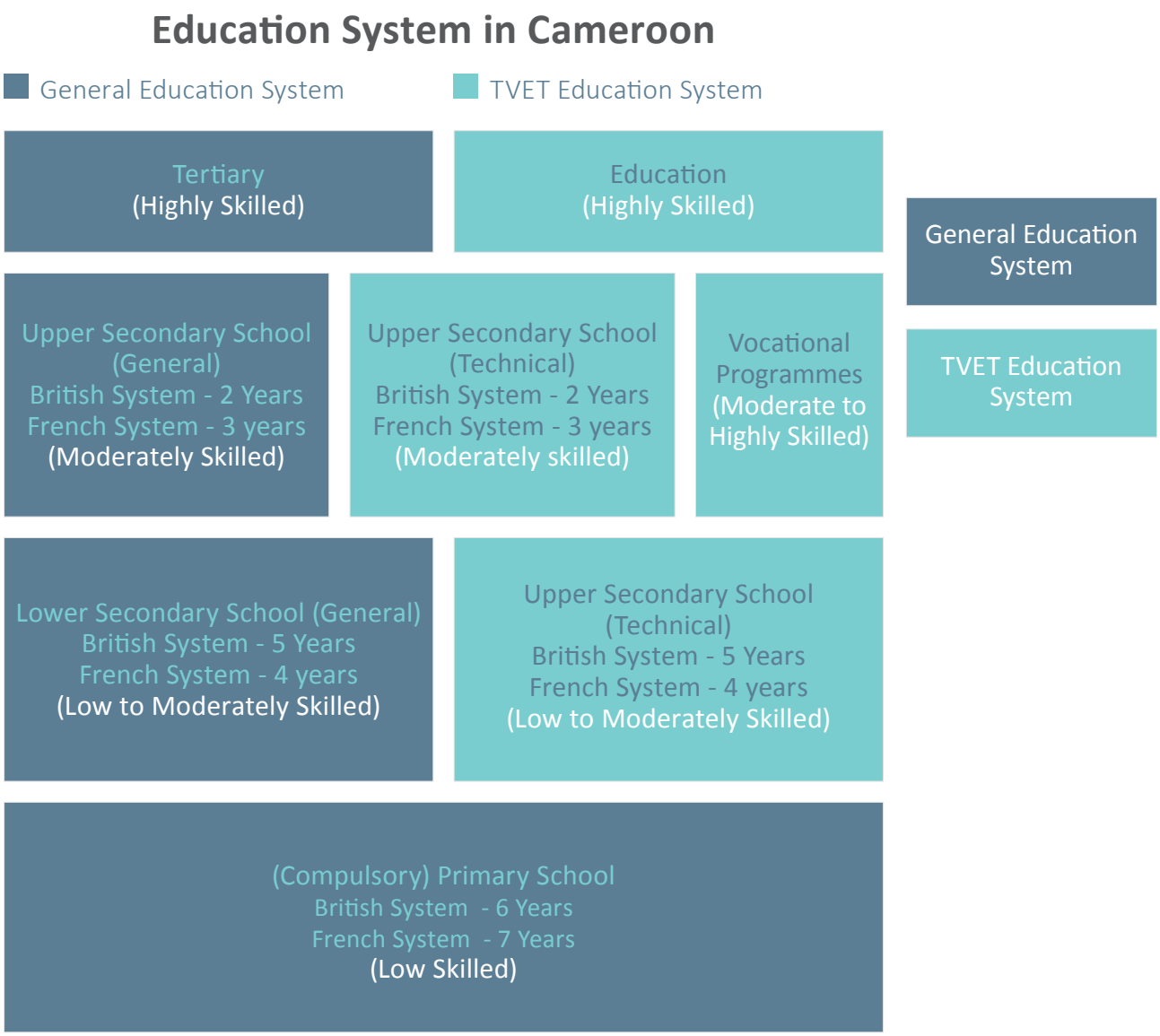
From this analysis, a few stylized facts can be pointed out regarding the labour supply in Cameroon:

- The Cameroonian economy, whilst maintaining high levels of employment (roughly 97% of all Cameroonians in the labour force were employed in 2019), is both extremely informal and coming from a low skills base.
  - It should be said that the youth unemployment rate in Cameroon is almost double the overall unemployment rate. This signals that young people are not sufficiently absorbed into the jobs market in the country.
- The economy is less able to "home grow" skills in the financial services, health, education, and public administration sub-sectors, as opposed to the skills required in the agriculture, manufacturing and construction sub-sectors. This is seen by how many occupations are referenced on the Cameroonian skills list pertaining to the health, education, financial and other sectors.
- Because an extremely large proportion of Cameroonians are self-employed and work in the informal sector, it is possible that the skills developed through providing for themselves do not match the formal labour market, meaning that there is very little room for growth in the formal sector, or development in the informal sector.
- The economy experiences severe underutilisation (underemployment) of those people who are, in fact, highly skilled (specifically, those who have a TVET[3] qualification). This is likely because the labour market is not developed enough to provide sufficient job opportunities to those who have relatively high levels of skill. However, according to Zouliatou (2017), this might also be because:
  - TVET courses lack practical training which makes candidates a better fit for working in Cameroon, creating a skills mismatch, and
  - The private sector in Cameroon has a relatively low involvement with the TVET system, which means that private sector employers in Cameroon might provide work which is below the skills level of the employee simply because they do not trust the standard of the TVET system.

In terms of skills generation, there is potential to create a moderately skilled labour force in the future from the perspective of TVET institutions in Cameroon. This is because, in theory, the TVET system in Cameroon permeates through secondary and tertiary education spaces in the country, enabling it to churn out moderately and highly skilled individuals. This is best summarised using Box 6.

[3]According to UNESCO and the ILO (2001), TVET refers to "aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life". Of course, there are differences between TVET systems across the globe, across countries and even across TVET institutions within the same country, but for the extent and purpose of this report even though qualification levels may vary, a TVET qualification of any form is still classified as providing high levels of competency or skill.

Box 6: Education System in Cameroon



Source: (UNESCO-UNEVOC International Centre for Technical and Vocational Training, 2015)

TVET education in Cameroon broadly sweeps across various economic sectors, with some offerings including[4]:

- Agriculture vocational training,
- Business services vocational training,
- Mining and quarrying vocational training, and
- General tradesman/industrial vocational training.

However, according to research done by the European Commission[5], the Cameroonian TVET-related skills supply has been hindered by:

- Low levels of financing for vocational education,
- A lack of well-functioning TVET colleges, as well as
- Unclear alignment between the skills fostered in the TVET system, and what employer needs are.

[4](World Bank Group, 2016)
[5](The European Commission, 2015)

These challenges to the TVET system in Cameroon have culminated in a TVET-educated skills base which might not match directly to the needs of the employers within the country in some instances. According to the ILO[6], the need for skills development in the country extends towards the following industries:

1. Manufacturing (particularly, manufacturing of medical equipment),
2. Financial services,
3. Information and Communication Technology (ICT), and
4. Healthcare services.

While no specific skills gaps have been pointed out in the draft report, at a broad level, employer responses to the ILO survey outlined the need for employees:

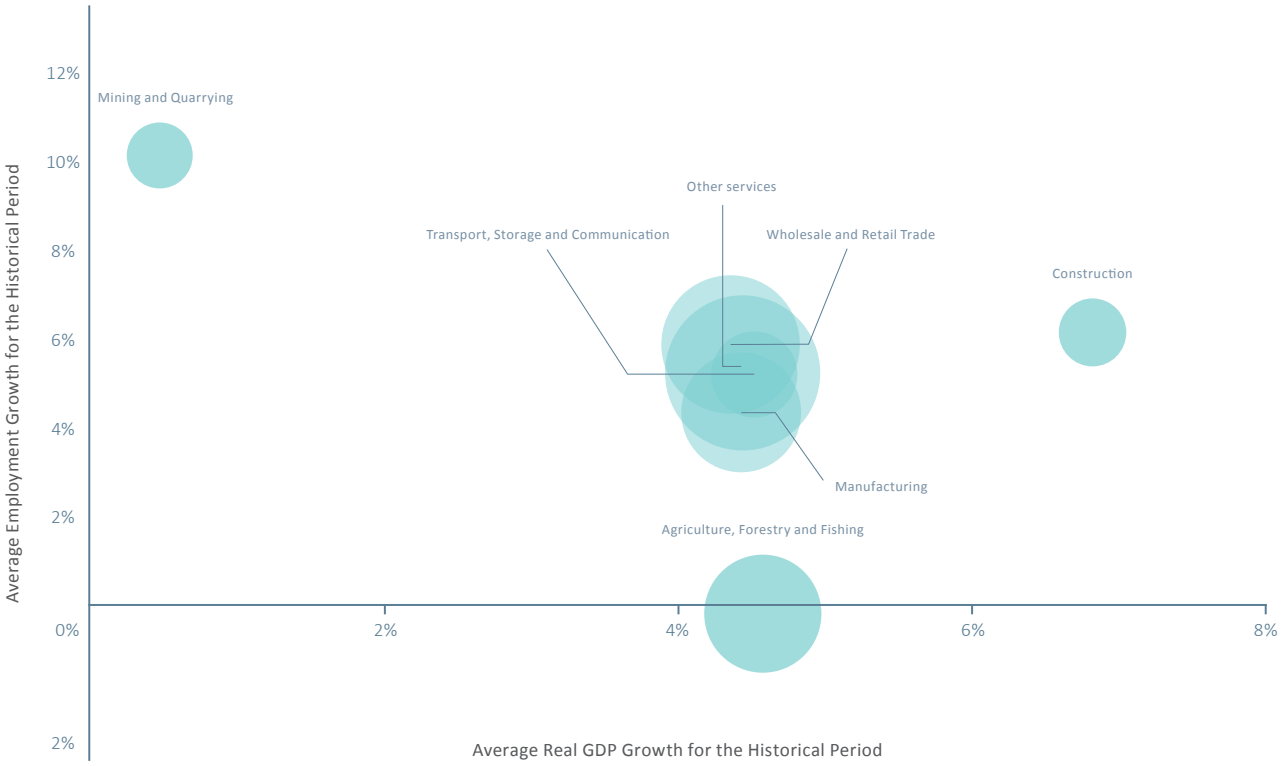
- To use communications technology in an effective manner,
- To have some level of data analytics or digital literacy skills,
- To be adaptive and be able to apply their skills in slightly different ways than they are used to.

6 Sub-sectors Deep Dives

6.1 Sub-sector Choice

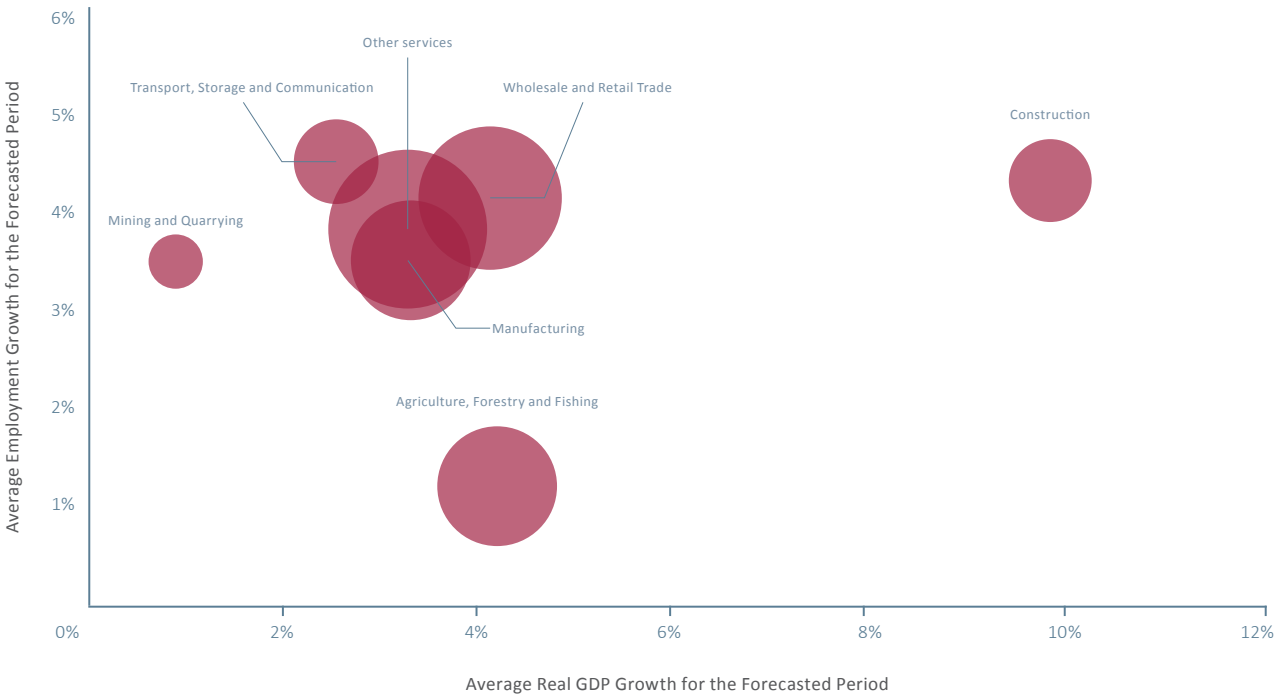
In order to choose which sub-sectors to focus on, it is first important to place each sub-sector into a matrix which summarizes their position within the Cameroonian economy. As such, we employ a similar sort of analysis as found in FG Consulting (2019), by using an employment-output growth matrix for both the historical and the forecasted period. The size of the bubble relates directly to the contribution of that sub-sector to real GDP[7].

Figure 4: GDP and Employment Matrix for all Sub-sectors in Cameroon (Averaged from 2008-2019)



[6](The International Labour Organization, 2020)
[7]As the bubble gets larger, so too does a sector's contribution to national real GDP within that time period on average.

Figure 5: GDP and Employment Growth Matrix for all Sub-Sectors in Cameroon (Averaged from 2020-2024)



Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

More than anything these graphics only summarize the analysis done before, and feed into the methodology to obtain priority sectors based on those sectors real GDP trends, employment trends, sizes, gender equality, and the impact of COVID-19 on those sectors (as outlined in the methodology).

From this, a handful of stylized facts can be pointed out:

- While the sub-sector analysis before painted a relatively promising picture in comparison to other African countries, it is still clear that each sub-sector will be in a worsened economic position post-COVID-19 than pre-COVID-19, across all metrics. This is particularly true for employment, which is expected to grow far slower after 2019 than before. (Note that it is only in the worst-case scenario where employment in each sector is forecast to decline; in all other scenarios modelled, employment is expected to grow less quickly than in the historical period).
- In comparison to other countries across the world, these findings are still relatively strong given the impact of COVID-19. This is particularly true because Cameroon is starting from a relatively low base in terms of real GDP and employment, and the impetus from major economic development is likely to outstrip the economic hardships brought about due to COVID-19 in some sub-sectors.
- The relative contribution of each sector is, however, expected to remain relatively similar across the forecasted and historical periods.

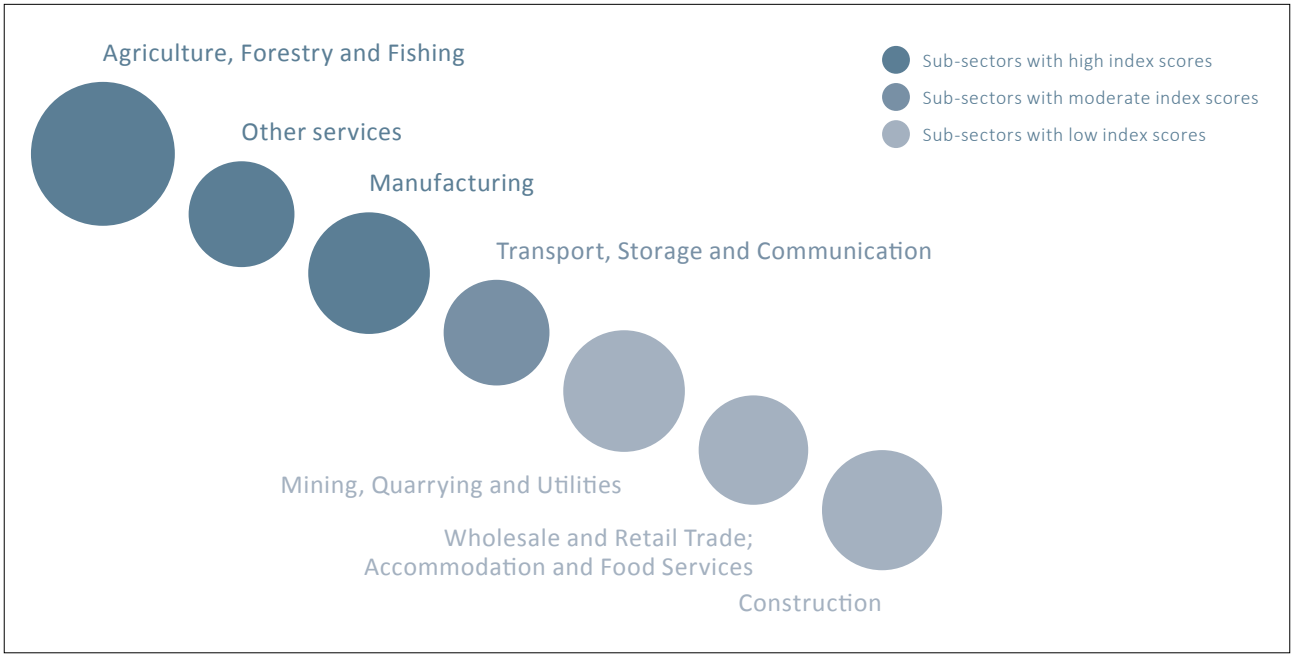
6.2 **Sub-sector Ranking**

Given all previous evidence, we use Principal Components Analysis (PCA[8]) to rank the sub-sectors. Weighting is based off of the following indicators:

- Historical employment and GDP growth,
- Forecasted employment and GDP growth taking into account the potential impact of COVID-19,
- Employment elasticity of output,
- A sub-sector's prevalence in the literature surrounding government priority,
- A sub-sector's susceptibility to COVID-19 as found in the literature,
- The persistence of an economic shock of the COVID-19 type at a sub-sector level (i.e., how long it takes for a sector to recover at least slightly from an economic shock), and
- Whether the sub-sector is gender-equitable by means of either:
  - An increasing trend of female employment between the historical and forecasted periods, or
  - Employing a female-majority workforce.

Prior to COVID-19, the sub-sectors were ranked according to the relevant indicators, and the following ranking was obtained:

Figure 6: Pre-COVID-19 Labour Demand Index Rankings

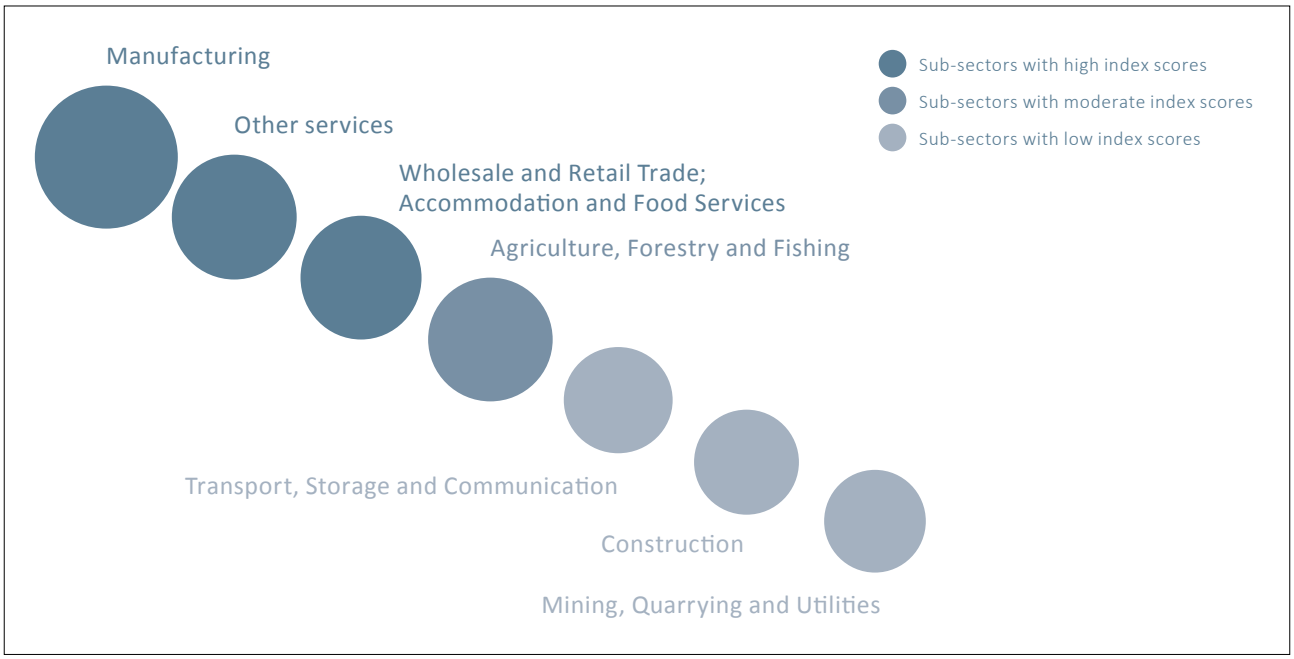


Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

[8]PCA is a weighting technique which attributes weight based on total variation of a particular indicator across time and across dimensions. It attempts to decompose each indicator, relative to all the others, into its core components. This method corrects for things like the relationships between the indicators which are meant to be weighted (for instance, output and employment are related).

When taking into account the impact of COVID-19, we find the following:

Figure 7: Post-COVID-19 Labour Demand Index Rankings



Source: Analysis of data from Open Data for Africa (2020); verified by data from The World Bank (2020) and United Nations (2020)

Considering all of the evidence, the following sub-sectors are prioritized to be focused on:

1. The Manufacturing sub-sector,
2. The Other services (education, health, financial services, and so on) sub-sector, and
3. The Wholesale and retail trade; accommodation and food services sub-sector.

These are the sub-sectors which tend to perform robustly across the various dimensions, and are susceptible to an economic shock due to COVID-19. That is not to say that each sub-sector is best performing across all dimensions (i.e., real GDP growth in the agriculture sector is not forecast to be the highest). Instead, it is these sub-sectors that simultaneously have:

- Relatively strong economic prospects,
- Relatively gender-equitable employment prospects,
- A place in the literature as a strategic priority, and
- A relative susceptibility to COVID-19 and its prospective economic impact.

Given Cameroon's Vision 2035, in conjunction with the World Food Programme report on Cameroonian initiatives, highlights the need to focus on manufacturing, retail trade, education, financial services, and improved access to adequate health and social services as focal sectors (beyond the discussion on utilities and on the ITC[9] sector, which has not seen an index score which is high because all the factors discussed above do not occur at the same time), it is clear that there is already significant overlap between this analysis and Cameroon's planned action.

[9]During the validation workshop held with colleagues from Cameroon, it was noted that Transportation, Communication and Storage (particularly ITC) was a growing sector in the Cameroonian economy, given the rise in prominence of the "Silicon Mountain" in Buea, among other things. However, due to a mixture of the impact of COVID-19 on the Cameroonian economy and the generally small share of national employment that the Transportation, Communication and Storage sector enjoys (as of 2020, the sector is only expected to employ between 5-7% of Cameroonians in the labour force), it has not been ranked highly in terms of employment/labour demand in the next 3-5 years. That said, it should be noted that ITC infrastructure plays a crucial part in enabling economic growth in the future, and any aspect of training individuals should embrace the use of technology going forward.

7 Labour demand and labour supply conclusions

Cameroon is characterized by a large, informal, and low-skilled labour market, albeit one with relatively strong ability to absorb employees (given its low unemployment rate). Based on the sub-sector ranking, it has been pointed out that the manufacturing, wholesale and retail trade, accommodation and restaurants, and other services sector (health, education, finance, etc.) are those most likely to experience an increased demand for labour given strategic priority nationally, and levels of employment and GDP growth.

From the Manufacturing standpoint, it is clear that skills in the production of protective equipment require improvement in Cameroon. Beyond this, it is important for workers in the manufacturing sector to be adaptable. Therefore, workers who are working in the textile industry who, for example, have previously had experience in making clothes or shoes now also need to be able to produce items such as masks. Therefore, short TVET and on-the-job training courses in Cameroon could be aimed at the following beneficiaries:

1. For those who already work in the manufacturing sector, on-the-job training courses remain key to improve skills. Short courses on mask manufacturing in the textile industry, on goggle and face shield manufacturing in the plastics industry, and the shift from alcohol production to sanitiser production in the alcohol industry will all aid in the growing skills gap within the country.
2. For those who are expected to enter the TVET system for the first time, specialist courses on PPE manufacturing should be considered. While the COVID-19 pandemic is hopefully a shorter-term rather than permanent issue, the fact that Africa is often hardest hit by rapidly spreading diseases (Ebola, Zika and Chikungunya for example) means that the need for affordable PPE will only increase across the continent.

From the perspective of "Other Services", the ILO survey has shed light on a more disaggregated view of skills needs in the sector. Specifically, the ILO report has highlighted that skills in the healthcare space and the finance space (as finance pertains to the use of digital technology).

Considering that university/college graduation rates are very low in Cameroon , it is likely that any intervention aimed at improving the number of adequately skilled individuals employed in these industries should begin with a dialogue with private sector partners (given that services sector employment is predominantly privately driven). Once the skills needs of private sector partners are identified, training interventions can be tailored to those needs.

At a TVET level, the healthcare profession can be supplied with well-skilled individuals who have training in:

- Primary healthcare provision,
- Nursing,
- Pharmacy and pharmaceuticals,

[10]This is because underemployment, and often times, unemployment comes after the struggle to obtain a tertiary qualification (State University, 2020)

To name but three main pipelines.

From a finance perspective, the role of technology in Cameroon is of utmost importance. Courses in finance, financial management and accounting all feed into the business sector in Cameroon, and all require a more hands-on approach to technological innovation. Of particular importance here is the link between private sector and TVET graduates. Because the private sector has the latest technology at its disposal in the country, it is possible to improve the TVET system by beginning learnership programmes. This would make the TVET offering more practical, and relate the skills generated from the TVET space directly to the needs of employers, specifically because TVET institutions in Cameroon are generally underfunded and experience a lack of access to the latest technology in their respective fields.

Finally, when focusing on Wholesale and Retail, and then separately Accommodation and Food Services, the following should be highlighted:

- The Wholesale and Retail sector in Cameroon is largely informal. However, even in informal economies across Africa, the need for technology is present. More and more, informal African wholesale and retail activities rely on E-Commerce (the buying and selling of goods and services through the use of an online platform). Courses in app development (especially retail app development) could move the informal Wholesale and Retail space forward, either by means of providing some level of formality within the sector or simply expanding the sector in general.
- The Accommodation and Food Services industry is expected to be badly impacted by the COVID-19 pandemic. Therefore, training offered to individuals in this space should be aimed at:
  - Training individuals to weather the impacts of the pandemic from a business perspective (i.e., providing courses in business or business management), and
  - Re-skilling/ Up-skilling individuals with a set of soft skills used to draw tourists once recovery begins (i.e., offering TVET courses in hotel management, hospitality management, chef training and so forth).

However, because the TVET system is either/both:

a. Potentially quite weak in Cameroon in terms of quality of training, or/and
b. Not “bought into”/trusted fully by the private sector

It is likely that any intervention should be aimed at improving the standing of the TVET system if the intervention is expected to be impactful.

Annexe 1 **Validation cliff notes**

The minutes from the validation workshop held with Cameroonian stakeholders can be found from here on:

Minutes SIFA Macroeconomic and Labour Market Sector Analysis Study Validation Workshop Cameroon

Date: 25 June | 2020 Presentation: Michele Capazario (DNA Economics) | Facilitation: Erick Sile (SIFA)

Participants in attendance:

1. Alain Tsemogne (SIFA FC Country Consultant)
2. Alfonce Tata (SIFA)
3. Unami Mpofu (AUDA-NEPAD)
4. Erick Sile (SIFA)
5. Sabine Klaus (SIFA)
6. Zarina Khan (SIFA)
7. Tiego Legodi (SIFA)
8. Michele Capazario (DNA Economics)

Participants excused:

1. GICAM (Employers' Association)- in an ad-hoc meeting
2. Comfort Ngu (Ministry of Employment and Vocational Training – Focal Point SIFA) – in an ad-hoc meeting

PURPOSE

Initially planned to take place in Cameroon, this workshop was organized virtually because of the current pandemic which makes traveling across borders impossible. To finalize the draft reports shared with stakeholders, this workshop sought to gather the following information for the finalization of the report:

1. Validation of assumptions made by Researchers;
2. The report's meaning and usefulness in relation to the National Development Plan and what is seen in the field;
3. Likeliness of the priority sectors highlighted in the report to enhance employability in a post COVID-19 environment;
4. Skills needed at country level in the identified priority sectors.

PRESENTATION

The methodology used to rank the sub-sectors was presented. The projection of GDP growth and employment growth relied on economic data over the last 10 years, up to 2018. This data, obtained mostly from the National Bureau of Statistics and other international organizations such as ILO and The World Bank, went through an initial validation process at country level.

The economic model used to rank the sub-sectors used a weighting system relying on the following indicators:

- Historical employment and GDP growth;
- Forecasted employment and GDP growth taking into account the potential impact of COVID-19;
- Employment elasticity of output;
- A sub-sector's prevalence in the literature with regard to government priorities;
- A sub-sector's susceptibility to COVID-19 as found in the literature;
- The persistence of an economic shock such as the COVID19 at a sub-sector level (i.e., how long it takes for a sector to recover at least slightly from an economic shock), and
- Whether the sub-sector is gender-equitable by means of either:
  - An increasing trend of female employment between the historical and forecasted periods, or
  - Employing a female-majority workforce.

According to the forecasting model, the following three sub-sectors are likely to benefit most from interventions aimed at improving labour market prospects for those entering the labour market:

1. Manufacturing;
2. Other services;
3. Wholesale and Retail trade; Accommodation and Food Services.

Discussions

The general feeling is that the landscape of TVETs is not brought up and discussed in depth in the report. The sector ranking provides much information about the demand side of the labour market. However, labour supply offered from training institutions is not analysed in the context of its appropriateness to meet demand. Additional data from Cameroon on the TVET sector will be useful to update the report with supply-side information.

Participants from Cameroon noted that the data presented in the report mirrors the reality on the ground. The report highlights "Wholesale and Retail; Accommodation and Food Service" among the priority sectors. But it is not possible to depict from the report the types of occupation and skills that are needed to satisfy labour demand coming from these this sector which could be split in two, because the data is not disaggregated to pinpoint which sub-industry out of the two is driving the results. This information would be important to TVETs institutions that need it to adapt their training modules to respond to the needs of the market. In Cameroon, the BTVETs (Business TVETs) are likely to offer training in business, sales, marketing and general entrepreneurship. These soft skills are very important to the "Wholesale and Retail; Accommodation and Food Service" sector which would benefit from short courses offered by BTVETs.

It was also clear that there is currently a mismatch between TVET graduates and industry needs. This is work in progress and we will need to gather more information with respect to the real numbers of people needed in each sector. Participants were unanimous that it is worth talking to business associations like GICAM, ECAM, etc. to get additional information on this.

Discussions also revolved around the opportunities in tourism and hospitality. This sector attracts a lot of women and the Ministry of Women's Empowerment and the Family collects data that could be used to design meaningful training programmes at TVETs institutions. Although not systematically collected and documented, such data could be accessed in some of the Women's Empowerment Centres found in the divisional headquarters.

Although the ICT sector was not mentioned as one of the priority sectors, it was noted during the discussions that software development is a growing sector and would require more attention since it attracts a lot of young people. However, the reason why ICT did not make it in the top priority sectors, despite its growing importance, is that it is not big enough. The observed skills mismatch in this sector and the cross-functionality of IT requires some attention as boosting skills in this sub-sector would in turn have positive impact on other sub-sectors such as agriculture, industrialization, etc. "The Silicon Mountain" in Buea (South West Region) for instance has been greatly disrupted not only due to the COVID-19 pandemic, but equally as a result of civil unrest. Most of the actors have now relocated to Douala, the economic capital, and other towns in the country.

Way forward

1. ILO will conduct a rapid assessment which will provide more information on the supply side and specific training requirements to meet existing demand in the private sector;
2. More information on the tourism sector from Cameroon will be shared with the team of Consultants;
3. Information from the TVET sector in Cameroon is necessary to update the report;
4. Results of the Rapid Skills along with any additional data will be used to update and finalize the report which could be strengthened with more supply side information. Feedback from GICAM, the Employers' organization, is still expected;
5. The final report of this study would constitute a useful tool to influence government action in the domain of professional education and skills acquisition in Cameroon;
6. Given the growth potentials provided by the tourism and hospitality sectors, it was recommended that a special study be conducted in this sub-sector to clearly establish the extent of such potential as a vector for youth employment in Cameroon.

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