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Algeria Entrepreneurship & Employment Project

Setif Economic Opportunity Analysis

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Local partners:

- ◆ Algerian
Center for Social
Entrepreneurship
(ACSE)
- ◆ MBI (Setif)

Executive Summary

The wilaya of Setif, Algeria's second most-populous, is home to around 1.8 million people and covers approximately 6500 km². A transit zone for goods coming from the south and onward to the ports at Bejaia, Jijel, and Djen Djen, and home to an international airport, it is an important contributor to the country's economy. With a dynamic business climate, the wilaya's approximately 10,000 registered small and medium enterprises (*SMEs, or enterprises with up to 250 employees*) employ more than 40,000 people.¹ In 2016, the services sector comprised slightly more than half of GDP, construction 26%, and agriculture and manufacturing 12% each.² The recent political situation has likely changed some of these percentages – in particular, the contribution of the construction industry is likely to have contracted – but in many ways Setif's economy has been more protected than that of Algiers from the effects of the protests and government actions, as well as from the decline in the international price of oil (*both the long-term and recent precipitous drop*).

In Setif, our research team identified three key industries that, as of Q4 2019, showed potential to provide youth employment and entrepreneurship opportunities: **agribusiness/food processing; construction materials; and plastics**. This selection was based on an analysis of export potential, presence of SMEs; volume of entry-level jobs; a supportive enabling environment; and committed leadership. In light of the current pandemic, the personal care and hygiene product industry, and related offshoots of the plastics industry, may also hold at least short-term potential for youth employment, as well as a variety of types of **support to remote work and e-commerce**.

Through interviews and workshops with SME representatives, the team mapped sector supply chains and identified and analyzed a) needs to support SME business growth and b) opportunities for youth employment and entrepreneurship in and across the three sectors. When asked how the project could help firms in their industry, a majority of firms identified help finding a trained workforce and connecting to inputs as major needs. Business strategy and the opportunity to interact with other firms were mentioned, but less of a priority.

Regarding youth employment opportunities in the selected sectors, we found:

In **agribusiness/food processing**, firms expected to hire for the following positions in the coming year:

- ◆ machine operator
- ◆ packaging agent
- ◆ cooker / high temperature oven operator
- ◆ preparer (to mix the raw materials)
- ◆ mold mixer
- ◆ food processor

Additional recruitment and training needs were identified for veterinarians and marketing and sales agents.

In **construction materials**, employers expected to hire young people in roles including

- ◆ machine and high temperature oven operator
- ◆ quality control
- ◆ management
- ◆ marketing
- ◆ sales
- ◆ welding

Additional opportunities may lie in product innovation (*e.g. design and engineering*).

In **plastics**, firms expected to hire for the following roles:

- ◆ machine operator
- ◆ assistant operator
- ◆ production engineer

¹ Chambre de Commerce et d'Industrie El Hidhab, Setif. *Annuaire Economique et Social* 2017.

² Oxford Business Group. *The Report: Algeria* 2016.

- ◆ production technician
- ◆ electrician
- ◆ turner
- ◆ quality control
- ◆ sales agent
- ◆ merchandiser

Across the three sectors, the most frequently mentioned positions for which employers expected to hire young people in the coming year were:

- ◆ machine operators and machine operator assistants
- ◆ cooks and high oven temperature operators
- ◆ sales agents

Of the positions with likely upcoming opportunities for youth, roles in which women currently work include sales, quality control, marketing, packaging, and preparer roles, most of which are considered to require tertiary education.

The COVID-19 pandemic results in new challenges for training and employment, as well as potential new opportunities. In addition to the plastics sector, which produces relevant products such as non-woven fabrics with medical application such as gowns and drapes, Setif's dynamic **personal care and hygiene products sector may see growth from increased demand during the pandemic.** Support to **remote work and e-commerce** also represents a new area of potential growth due to economic changes surrounding the COVID-19 pandemic. While this area was not one of the priority sectors identified in this research, it may represent greater opportunity for employment growth in the short and medium term. Training and recruitment needs may include:

- ◆ Traditional BPO fields, including accounting, billing, health records, data processing, technical support, technical writing, translation, transcription, customer service, and sales
- ◆ IT engineers managing networks, web-based work platforms, e-learning, e-commerce, and e-payment/mobile money platforms
- ◆ Web developers
- ◆ Social media managers
- ◆ Online marketing managers
- ◆ Graphics design, video editor, animator
- ◆ Creation of online education content, management of online learning sites
- ◆ Health and Safety (HSE) managers

Employers identified many soft skills as lacking in young jobseekers. Several employers, perhaps frustrated with their employees, merely ticked off every soft skill we asked about. However, enough others homed in on specific skills that some patterns may be identified. The most frequently mentioned skills lacking were attention to detail; emotional intelligence; resilience in the face of setbacks; punctuality, work planning and meeting deadlines; agreeableness, flexibility and collaboration; truthfulness/honesty/integrity; seeing the big picture; self-control and self-discipline; and positive self-concept, self-efficacy, and confidence.

The Algeria E&E project not only targets formal employment, but also seeks to advance youth-led business incubation in demand-driven products and services, particularly those that serve other businesses through a B2B model. According to our research, there may be opportunities to support youth-led businesses in the following areas:

In **agribusiness/food processing**,

- ◆ recycling and recovery of waste materials
- ◆ raw materials and input supply

In **construction materials**,

- ◆ market research
- ◆ packaging
- ◆ merchandising

In **plastics**,

- ◆ waste collection and sales
- ◆ machine maintenance and repair
- ◆ computer systems
- ◆ quality testing

Across the three sectors, there may be the greatest B2B enterprise opportunities for young people in:

- ◆ raw materials supply
- ◆ waste collection and sales
- ◆ marketing

Additional business-to-business needs, which may be better met by more experienced entrepreneurs, include:

- ◆ finance
- ◆ training
- ◆ management and organizational services
- ◆ import/export consulting

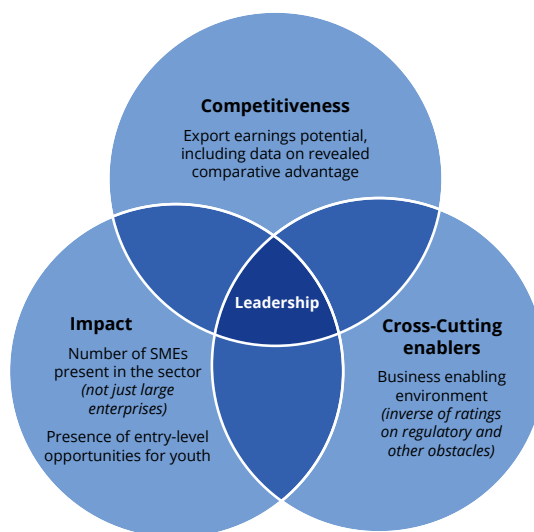
As of this writing Setif's population has not yet been affected significantly by the coronavirus pandemic. However, even before coronavirus reached Algeria, many if not most businesses were in an economic holding pattern, and though the project is centered around understanding and solving challenges to SME growth, firms may be more focused on survival and, after the pandemic recedes, on recovery. A potential silver lining is that the drop in oil prices as well as the potential decrease in international production that the coronavirus outbreak could bring about may present a prime opportunity for the country to diversify its economy and boost domestic production in the non-hydrocarbon sector, thereby reducing reliance on imports and creating more and better opportunities for Algerians.

Industry sector priorities and rationale

After initial desk research to identify the top 5-6 industry sectors/value chains in Setif, the project applied a streamlined version of USAID's value chain selection approach³ to narrow these options to the 3 industry sub-sectors or more specific value chains that are the most promising, based on four major criteria: competitiveness (*in this context, we are most interested in export revenue potential*), impact (*here, in terms of SME growth and youth employment potential*), cross-cutting enablers (*in the Algerian context, focusing on sectors with relatively lower bureaucratic and regulatory obstacles*), and leadership (*the willingness of lead firms or a formal or informal industry association to invest time and effort in increasing value chain competitiveness*). Annexes A and B provide the full methodology and report of the sector selection process.

Background interviews in Setif focused on gathering quantitative and qualitative data on these indicators to make a final selection of three industry sub-sectors per site. It should be noted that this selection process was intended to be rapid and based on well-recognized issues within each project site. As USAID guidance states, *"An overly detailed or exhaustive selection process can preempt the value chain analysis, add complexity without adding value, and significantly increase the cost of the selection process."*⁴

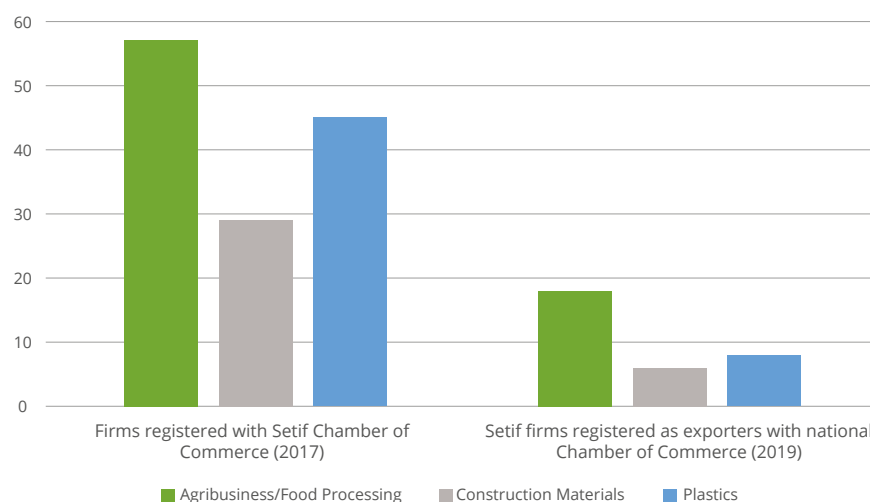
Combining quantitative analysis of exports, Chamber of Commerce



³ See USAID MarketLinks guidance: <https://www.marketlinks.org/good-practice-center/value-chain-wiki/value-chain-selection-overview>

⁴ <https://www.marketlinks.org/good-practice-center/value-chain-wiki/value-chain-selection-overview#criterion-1>

membership, and job vacancy data; and qualitative interviews with 13 business representatives in Setif, the project team identified three target industries that show potential to provide youth employment and entrepreneurship opportunities. Specific qualitative criteria included respondents' perceptions of: export potential; presence of SMEs; volume of entry-level jobs; a supportive enabling environment; and committed leadership. Based on analysis of the data, the project team selected the combined sectors of **agribusiness/food processing** (*representative products include semolina, cheese, and beverages*); **construction materials** (*e.g., tile and ceramics*); and **plastics** (*e.g., plastic tubes, bottles, and PVC products*).



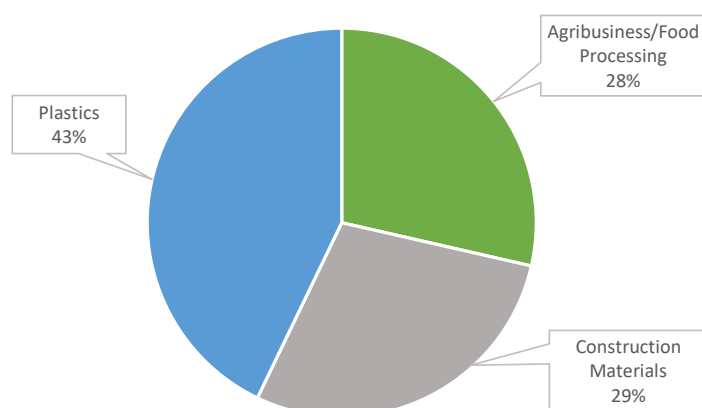
Consumer electronics initially was included in the top three ranked sectors due to respondent information, however, further investigation indicated that there are actually few SMEs operating in this sector in Setif. Therefore, although it may offer some potential for youth employment in Setif, and firms in the sector should be considered for activities to support youth workforce development and/or business incubation, it does not appear to offer sufficient avenues for the cooperation with SMEs that this phase of the project intends to achieve.

Although this research was carried out prior to the coronavirus outbreak, it is possible that industries with particular growth potential in the context of coronavirus mitigation could include Setif's strong personal care and hygiene products industry, led by large companies such as FADERCO, as well as the plastics industry, which currently produces non-woven fabrics for medical uses, among other purposes.

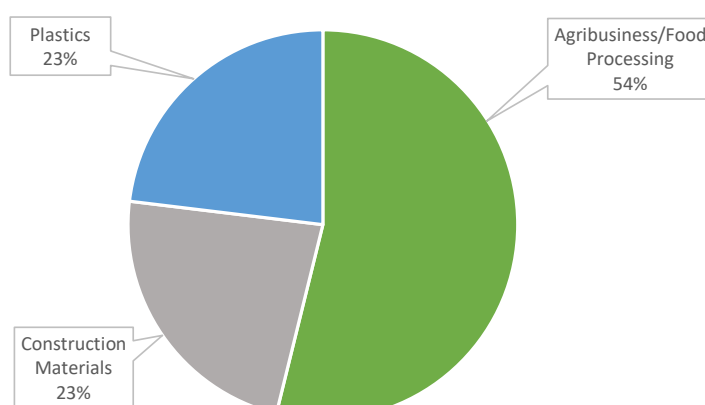
Mapping Supply Chains and Identifying Needs and Opportunities

In this phase of the research, consultants and technical staff members conducted a total of 21 interviews of SME representatives via individual face-to-face and telephone interviews (*9 plastics enterprises and 6 each in construction materials and agribusiness/food processing*) as well as sector workshops (*which included 7 agribusiness firms and 3 each from construction and plastics*). This primary data collection process allowed the project team to develop supply chain maps and identify SME priority partners as well as growth needs and opportunities for training and new business creation in the sector.

Individual Interviews (n=21)



Participants in Sector Workshops (n=13)



The maps shown below are generalizations based on information received from representatives of these businesses. The maps are designed to be read from bottom to top, showing actors and the connections between them across the three main stages of the supply chain: pre-production (*local and imported inputs*), production (*manufacturing*), and post-production (*packaging, marketing, distribution, and sales*). Algerian entities central to the sector are shown in blue; supporting services are shown in purple; and foreign entities are shown in gray. Connections between Algerian entities are shown with blue lines, while connections between Algerian and foreign entities are depicted with gray dotted lines. Potential opportunities, as identified in orange call-out boxes, emerged in conversations with informants and should be validated in future discussions with sector actors, as they may or may not be representative of the sector in Setif as a whole.

Agribusiness/Food Processing

Agribusiness and food processing have both significantly increased their contribution to Algeria's GDP and employment over the last decade. Furthermore, the recent drop in the price of oil may actually present opportunities for Algeria's agribusiness sector, as decreased foreign currency reserves may increase pressure to produce more foodstuffs domestically. The country's 2008 Agricultural and Rural Renewal Policy and Felaha 2019 initiative aim to boost food security in part by reducing the country's reliance on imports of basic foodstuffs and moving toward self-sufficiency in strategic agri-food chains, such as durum wheat. This includes supporting production of sheep, cattle, goats, white meat, fruit, vegetables and milk; and promoting local dates, oils and grapes.

Algeria's domestic market for agricultural products and food is significant. As of 2017 it was the world's largest consumer of cereals, and the leading consumer of milk in North Africa. As Algeria's middle

class grows and women increasingly enter the workforce, Algerians are buying more processed and convenience foods (*and, prior to the pandemic, going out to restaurants*) rather than solely preparing foods at home from scratch. For example, demand for prepared meals – particularly ready-made salads – has increased significantly in recent years. At the same time, the upper class is increasingly seeking higher-end products.⁵

Currently, the country's top food exports by value include sugar, sugarcane, and dates. Meanwhile, according to analysis of recent trade data, agribusiness products in which Algeria has a growing market share, and for which the world market is growing, include:

- ◆ Animal or vegetable fats and oils
- ◆ Edible fruit and nuts
- ◆ Preparations of vegetables, fruit, nuts
- ◆ Cocoa and cocoa preparations
- ◆ Fish and seafood
- ◆ Oil seeds and oleaginous fruits
- ◆ Cork and articles of cork
- ◆ Sugars and sugar confectionery

The Setif region's agribusiness and food processing industry is robust, with 47 food processing businesses and 10 agricultural companies registered with the local Chamber of Commerce. The main field crops are cereals, fodder, and to a lesser extent vegetables; tree crops include figs and olives; and cattle-raising including dairy cows producing milk is also significant. The 18 Setif-based agribusiness and food processing firms currently registered with the national Chamber of Commerce to export mainly produce dates, almonds, and beverages.⁶ The majority of Algeria's fruits and nuts exports go to Europe, while beverages are largely exported to other African countries⁷, for example juices to Libya and Tunisia.

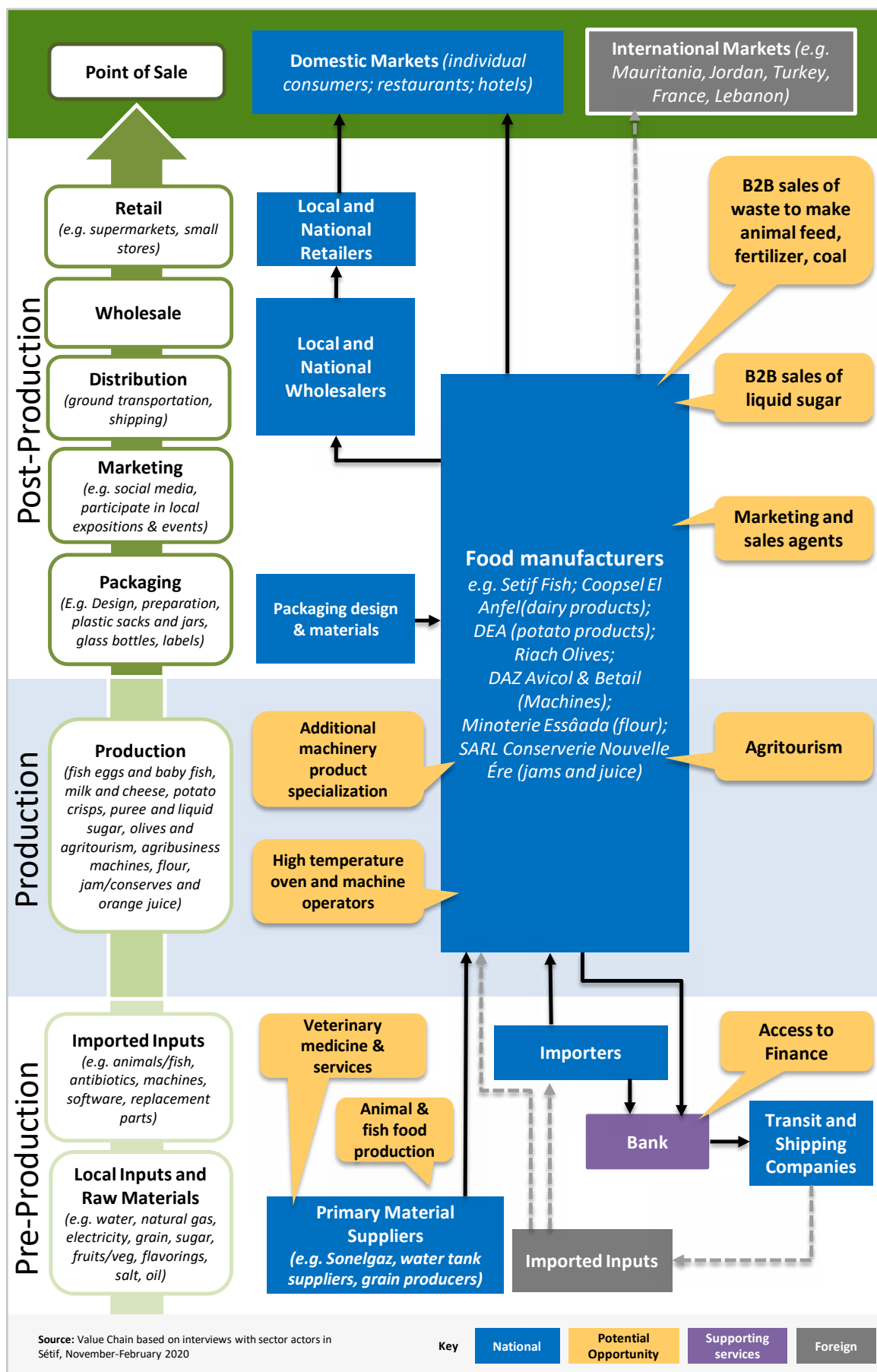
Once the sector was selected for inclusion in the project, the research team identified and interviewed individual SMEs including producers of semolina, beverages, corn flakes, and cheese. To further develop the supply chain map, the research team then convened a follow-on workshop; participating businesses included a dairy co-operative; a producer of jams, conserves, and orange juice; an olive producer; a flour manufacturer; a fish farm; a manufacturer of potato purees and crisps; and an agricultural machinery manufacturer.

5 <https://en.djazagro.com/Exhibition/Show-news/Algerian-food-production>

6 Chambre Algerienne de Commerce et d'Industrie. Fichier des Exportateurs Algeriens. Annee 2019.

7 https://oec.world/en/visualize/tree_map/hs92/export/dza/all/show/2017/

Supply Chain Map of the Agribusiness/Food Processing Sector in Setif



The Setif Agribusiness/Food-processing map shows on the left-hand side the different stages, actors, activities, and connections in the supply chain. From bottom to top, the stages are pre-production (*local inputs and raw materials and imported inputs*), production, and post-production (*packaging, marketing,*

distribution, wholesale, and retail). In the agribusiness and food processing sector in the pre-production stage, local inputs and raw materials include gas, water, and grain, provided by primary material suppliers (*blue box*). Imported inputs (*gray box*) include animals and fish, antibiotics, and machines. Banks provide financial services (*in purple*). In the production stage, examples of goods produced include fish eggs and baby fish; dairy products; and potato products. In the post-production stage, the chain shows illustrative steps of the process to take the finished product to market, including (*e.g.*) packaging design, social media marketing, distribution, sales and so on, carried out by the actors in the blue boxes (*the manufacturers themselves, packaging designers and suppliers, wholesalers, and retailers*). At the top are the different final markets – domestic (*in blue*) and international (*in gray*). The opportunities, in orange, are detailed in the sections below.

Analysis of needs to support SME business growth in the sector

Across the sector, SMEs identified a lack of access to raw materials as a challenge to growth. Several examples follow: A fish farmer described reluctantly producing his own fish food and medicine in the absence of these products' availability in Setif. A representative of a dairy cooperative explained that cows are purchased from the Netherlands because there are not sufficient cows available locally, even though once imported Dutch cows' milk yield falls is lower than local cows'. And a representative of an SME producing jam described a monopoly on sugar leading to higher costs for that essential input.

In addition, a dairy product manufacturer mentioned the extensive regulatory obstacles to become authorized to produce cheese; streamlining and supporting businesses through this process might open up opportunities for more businesses to operate under the official regulations and standards. A lack of access to payment methods in foreign currency in order to participate in import/export activities was noted in this sector, as in the others investigated across Setif as well as greater Algiers.

Analysis of opportunities in the sector

Demand-driven training and recruitment

Prior to the coronavirus outbreak, individual SME respondents in the agribusiness and food processing sector indicated that over the coming year they expected to hire young people in the following occupations⁸:

- ◆ Machine operator (to operate or tend equipment to prepare food products)
- ◆ Packaging agent (to pack or package materials by hand or machine)
- ◆ Cooker / High temperature oven operator (to operate or tend food roasting, baking or drying equipment)
- ◆ Preparer (to mix raw materials)
- ◆ Mold mixer (to set up and operate equipment that mixes or blends ingredients, pour into molds, and place into oven)
- ◆ Food processor (general tasks to prepare food products)

The majority of these positions require a secondary or vocational education and could be partially or completely learned through internships. Of these positions, employers indicated that women currently work as packaging agents and preparers. Notably, the role of packaging agent was the only potential vacancy identified by employers across the three sectors in which women currently work and which does not require a university education.

As part of the workshop, additional recruitment and training needs were identified for veterinarians and marketing and sales agents. It should be noted that women are currently working in sales and marketing positions within SMEs in the other sectors interviewed for this research, so there may be lower barriers to entry for women in those roles in the agribusiness/food processing sector as well.

Opportunities for B2B products and services

Many of the opportunities identified in this supply chain included recycling and recovery of waste materials, for example to be used as fish food (*e.g. potato peels*); animal food (*olive pulp*); energy sources

⁸ Text in parentheses is drawn from standardized job descriptions in the U.S. Department of Labor's O*NET OnLine occupational database, www.onetonline.org

(olive pits); fish pool flooring material (orange waste) and fertilizer (cow manure). A number of potential synergies emerged between participants in the workshop. The dairy co-op has already identified local production of fish and animal food and provision of veterinary services as an opportunity; its emerging offerings might be more broadly marketed to others in the sector. The potato products manufacturer is producing liquid sugar from downgraded potatoes, a product which was appealing to the jam manufacturer as it is looking for an alternative source of sweetener; again, this product could prove more widely in demand across the sector. Additionally, several of the companies currently importing machinery were interested in purchasing customized equipment from the agricultural machinery manufacturer.

Construction Materials

Setif is a significant producer of cement, aluminum and ceramic products, and in 2017 the local Chamber of Commerce listed 78 companies under “Construction Materials, Public Works, and Hydraulics”, of which 29 produce construction materials. 6 Setif-based construction materials firms were listed as exporters in 2019.⁹ Nationally, Algeria’s top construction materials exports include insulated wire, float glass, plaster articles, and unglazed ceramics, the bulk of which go to other countries in Africa.¹⁰ Local mines and quarries and some illustrative uses of their resources include¹¹:

- ◆ Clays (bricks, tiles, ceramics, earthenware)
- ◆ Gravel
- ◆ Marble
- ◆ Limestones (cement, lime, aggregates)
- ◆ Dolomite (industry)
- ◆ Sandstone (Silica brick)
- ◆ Gypsum (plaster, ceramic)
- ◆ Gem Salt
- ◆ Barite
- ◆ Lead
- ◆ Zinc
- ◆ Iron

Once the sector was selected for inclusion in the project, the research team identified and interviewed individual SMEs including producers of floor tiles, ceramic sanitary products, road surface material, and metallic joints. To further develop the supply chain map, the research team then convened a follow-on workshop; participating businesses included manufacturers of ceramic tiles, flooring slabs, and electric cables.

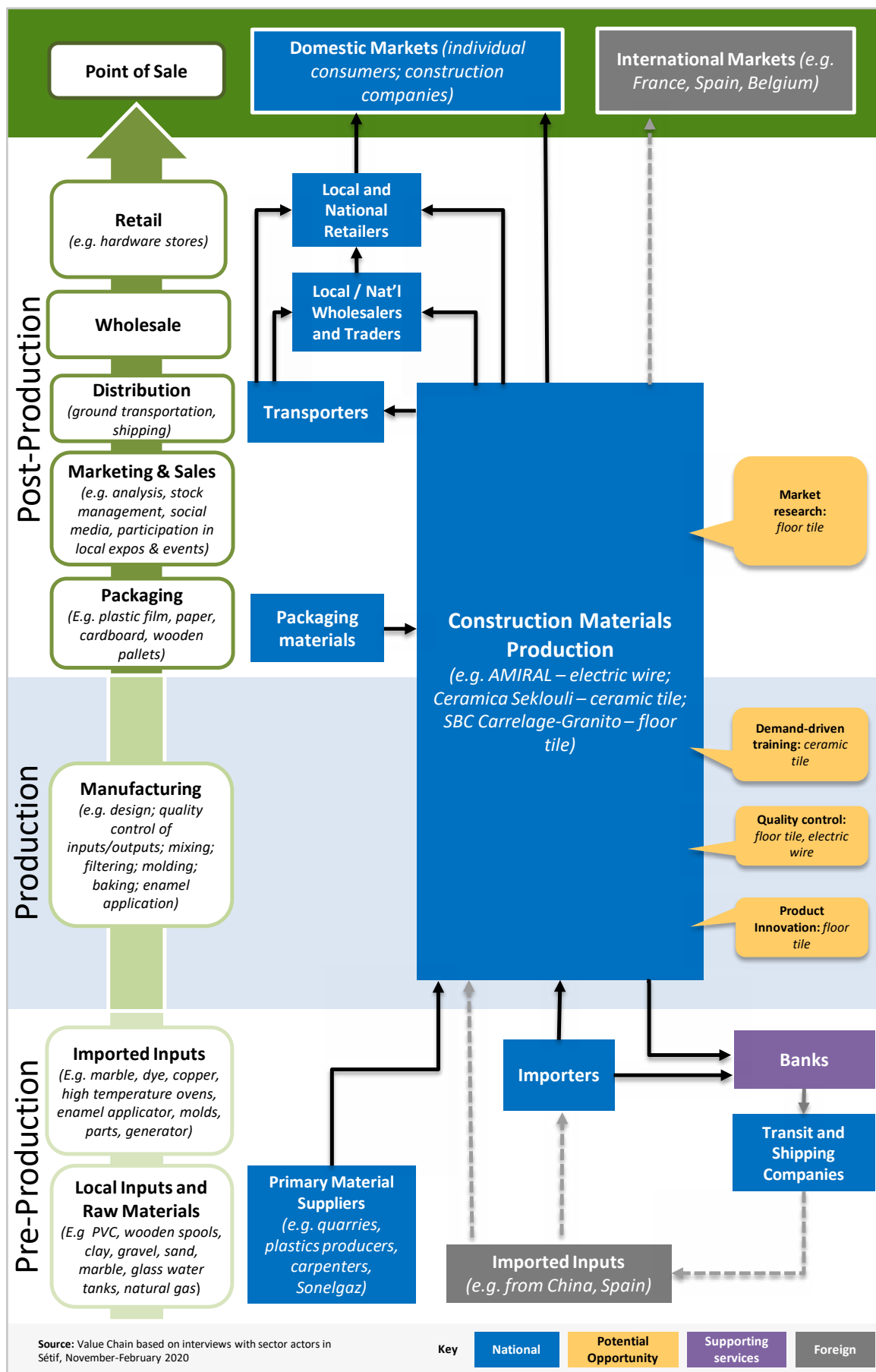
In the last year, the construction sector has contracted across the country as a result of uncertainty due to the political situation, as well as some large developers’ imprisonment by the authorities. It is likely that the coronavirus pandemic will further impact this sector. However, during our research, which was conducted prior to the outbreak, an overwhelming majority of firms we spoke with indicated that their revenue and personnel had increased over the past year, and they expected to hire young people for a number of positions in the coming year.

⁹ Chambre Algerienne de Commerce et d’Industrie. Fichier des Exportateurs Algeriens. Annee 2019.

¹⁰ https://oec.world/en/visualize/tree_map/hs92/export/dza/all/show/2017/

¹¹ Chambre de Commerce et d’Industrie El Hidhab, Setif. Annuaire Economique et Social 2017.

Supply Chain Map of the Construction Materials Sector in Setif



The map shows on the left-hand side the different stages, actors, activities, and connections in the supply chain. From bottom to top, the stages are pre-production (*local inputs and raw materials and*

imported inputs), manufacturing, and post-production (*packaging, marketing and sales, distribution, wholesale, and retail*). In the construction materials sector in the pre-production stage, local inputs and raw materials include plastic products, wooden spools, clay, gravel, and sand, provided by primary material suppliers (*blue box*). Imported inputs (*gray box*) include marble, dyes, and machines. Banks provide financial services (*in purple*). In the production stage, examples of goods produced include electric cables, ceramic tiles, and flooring slabs. In the post-production stage, the chain shows illustrative steps of the process to take the finished product to market, including (*e.g.*) packaging design, market analysis, and ground transportation, carried out by the actors in the blue boxes (*the manufacturers themselves, packaging materials suppliers, transporters, wholesalers, and retailers*). At the top are the different final markets – domestic (*in blue*) and international (*in gray*). The opportunities, in orange, are detailed in the sections below.

Analysis of needs to support SME business growth in the sector

Since construction activity has slowed in Algeria since the beginning of the protests, sales of construction materials have generally contracted, especially for non-exporting firms. Several companies we interviewed were interested in exporting, but at various stages in the process of being able to do so. Based on our discussions with businesses, it seems that supporting Setif SMEs' ability to diversify, update, improve the quality of, and market their offerings might help them gain existing domestic market share and perhaps to eventually export their products. For example, one company producing "*granito*" (*aka terrazzo*) slabs – a mixture of cement with glass and marble chips – developed their main product lines many years ago, and the specific style, prevalent in prior decades, is no longer fashionable. However, the business does not have the ability to conduct market research or product innovation. Traders who bring goods from the west to sell in Setif buy up the slabs so as not to return back west with empty trucks, but often end up unloading the product at below-market rates. Meanwhile, the use of terrazzo tile as a construction material, albeit with a more current aesthetic, is presently quite fashionable internationally.¹²

Similarly, a company producing electric cables for construction use was apparently doing little to ensure the quality of its products or differentiate them in the marketplace via, for example, branding and packaging.

Price increases and supply disruption were also mentioned as a challenge in this sector; there may be an opportunity for the project to help forge new connections between raw materials suppliers and construction materials manufacturers to diversify the latter's access to inputs. Access to foreign currency to engage in the import of inputs and the export of goods was another area of need.

Analysis of opportunities in the sector

Demand-driven training and recruitment

In the coming year, the employers we interviewed expected that they would be hiring young people in roles including machine and high temperature oven operators; quality control; management; marketing; sales; and welding. Educational requirements for these positions were for the most part split between secondary/vocational and tertiary, and employers considered most roles to require a technical background. Among the firms we spoke with in the construction materials sector, women are currently working in quality control, marketing, and sales roles (*all of which employers consider to require a tertiary degree*).

Opportunities for B2B products and services

Following the above findings, the best opportunities for youth entrepreneurs in the construction materials sector may lie in:

- ◆ market research to help SMES better understand the nature and scale of demand for particular products and styles
- ◆ designing and producing packaging that can help SMEs better differentiate and demonstrate the quality of their products
- ◆ merchandising of products to ensure that they are prominently located and featured in wholesale and retail locations

¹² <https://www.vogue.com/article/how-terrazzo-moved-out-from-under-our-feet-to-absolutely-everywhere>

Another need – perhaps better suited to individuals with more experience than youth would be likely to have – is in export consulting to help SMES through the complicated process of selling their goods abroad.

Plastics

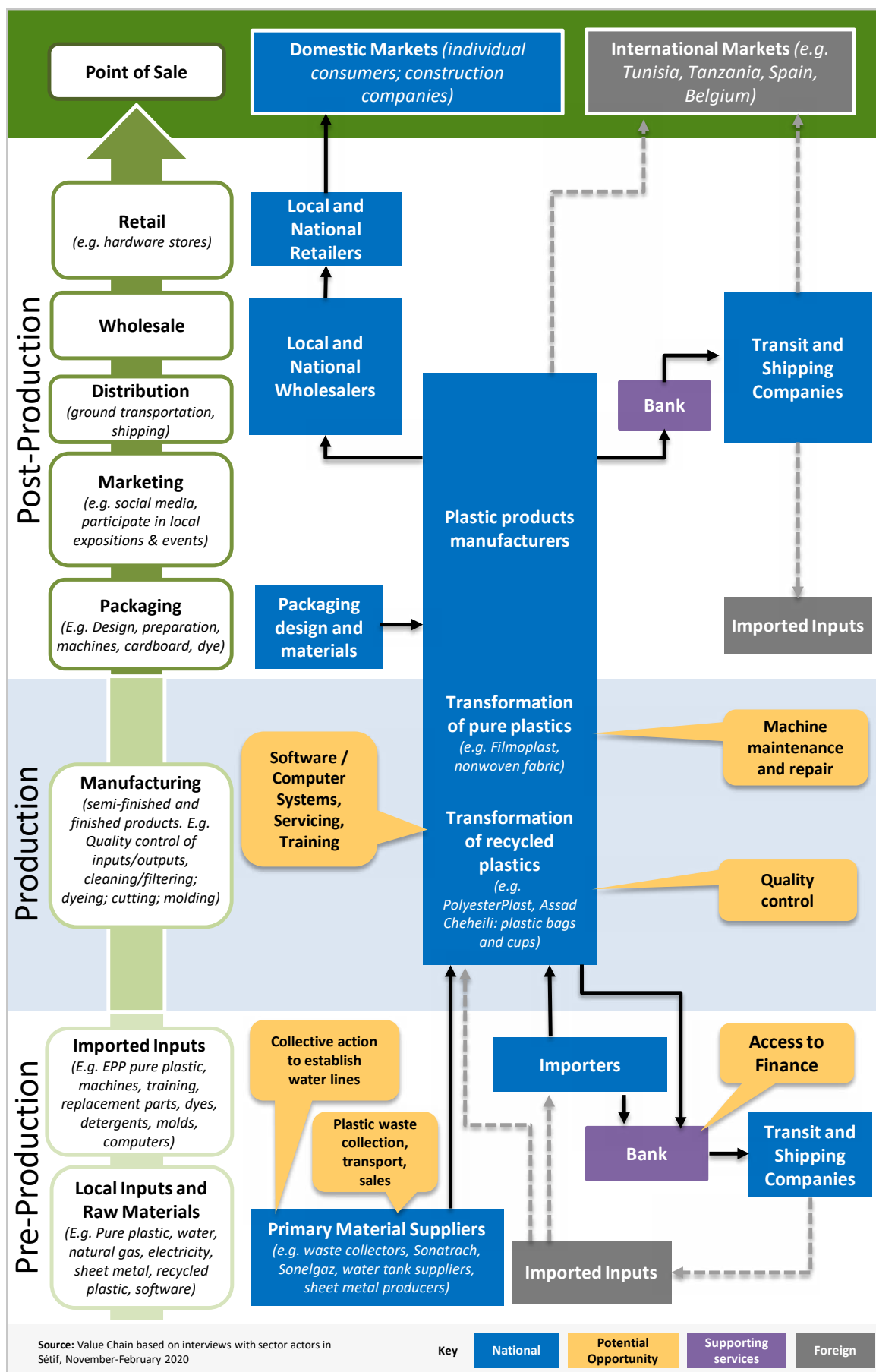
Setif's burgeoning plastics sector, fed by inputs supplied by the petrochemical industry, was established in the 1970s. In 2017, there were around 45 plastics companies listed with the local Chamber of Commerce. In 2019 there were around 54 listed online with the national Chamber of Commerce, with 8 registered as exporters. The majority of Algeria's \$5.1m in plastic exports (*as of 2017*) go to other countries in Africa (*particularly Tunisia, Cameroon, and Libya*), with Europe as a secondary market. Plastic lids make up 55% of the exports in this sector, followed by scrap plastic and raw plastic sheeting. For the country as a whole, plastic housewares and pipes are the products which saw the greatest growth in export value between 2012-2017.¹³

Some plastics companies in Setif are engaged in plastics processing; some produce finished products; and others do both. Businesses utilize recycled and pure plastic as an input. Products produced in Setif include examples such as non-woven fabric (*including for medical use*), water and gas pipes, PE and PVC tubes, plastic film for agricultural and other uses, milk pouches, furniture, notebook covers, and household items.

Once the sector was selected for inclusion in the project, the research team identified and interviewed individual SMEs manufacturing both semi-finished and finished products from both recycled and pure plastic, including producers of plastic tubes, plumbing materials, and bottles. To further develop the supply chain map, the research team then convened a follow-on workshop; participating businesses included manufacturers of non-woven fabric and plastic film, plastic cups and bags.

¹³ https://oec.world/en/visualize/tree_map/hs92/export/dza/all/show/2017/

Supply Chain Map of the Plastics Sector in Setif



The map shows on the left-hand side the different stages, actors, activities, and connections in the supply chain. From bottom to top, the stages are pre-production (local inputs and raw materials and imported inputs), manufacturing, and post-production (packaging, marketing, distribution, wholesale,

and retail). In the plastics sector in the pre-production stage, local inputs and raw materials include pure and recycled plastic, water, and sheet metal provided by primary material suppliers (*blue box*). Imported inputs (*gray box*) include machines, dyes, and detergents. Banks provide financial services (*in purple*). In the production stage, examples of goods produced include nonwoven fabrics, plastic bags, and plastic cups. In the post-production stage, the chain shows illustrative steps of the process to take the finished product to market, including (e.g.) packaging design, marketing, and ground transportation, carried out by the actors in the blue boxes (*the manufacturers themselves, packaging materials suppliers, transit and shipping companies, wholesalers, and retailers*). At the top are the different final markets – domestic (*in blue*) and international (*in gray*). The opportunities, in orange, are detailed in the sections below.

Analysis of needs to support SME business growth in the sector

The plastics sector appears to hold significant potential for growth. SMEs who participated in our sector workshop noted that existing production capacity in the sector is insufficient to meet domestic needs; Algeria currently imports a range of plastic products which are produced in Setif, including plastic sheeting and pipes. Not only were SMEs interested in expanding to meet domestic needs, but those we spoke with who are not currently exporting were interested in doing so.

However, a common refrain for companies processing recycled plastic was the difficulty of obtaining a steady source of waste plastic. In fact, the country also imports significant amounts of scrap plastic. Another area of need identified was establishment of a water line to the industrial zones which don't currently have them; companies must currently purchase water tanks and some even dig illegal wells to get the water they need for the cleaning stage. In fact, this was an area of common need across the priority sectors in Setif. As in the construction materials sector, input price increases and lack of access to foreign currency to engage in the import of inputs and the export of goods were obstacles to growth and export.

Analysis of opportunities in the sector

Demand-driven training and recruitment

Training writ large was an explicit need mentioned by SMEs in the sector. The key workforce need in the plastics sector appears to be for trained machine operators and assistant operators, as well as other technical and operational roles (e.g. *production engineer, production technician, electrician, turner*). Quality control is potentially another area of training need (*see below*). SMEs also mentioned expecting to hire for roles such as sales agent and merchandiser in the coming year. In this sector as compared to the other two priority sectors, more positions were noted to require a secondary vocational education and a technical background, though several roles required a tertiary education. Again, in this sector, potential vacancies for roles in which women were noted to be currently working (*quality control and sales*) will require a tertiary degree, according to employers.

Opportunities for B2B products and services

Currently, recycled plastic inputs are mainly provided by local suppliers; young people who collect waste; and some small informal companies; companies also recycle their own waste products. One firm collects waste products from other small plastics producers, and engages in small scale purchasing from waste collectors. Given the lack of steady access to waste plastics for inputs, there is a clear opportunity for firms to organize to collect plastic waste and sell it to manufacturers. Also, considering the ubiquitous consumption of plastic goods, opportunities in plastic waste collection and sales would presumably be present across Algeria and should be considered as the project expands to additional sites.

Machine maintenance and repair is another key need. Most locals who were trained to repair and maintain the machines when the industry was established more than 40 years ago are now retired, and there are apparently no local programs that train to the same level of technical quality as in decades past. Therefore, this may be a specialty outsourcing possibility. Another potential opportunity lies in computer systems design, installation, servicing, and training, particularly in the area of inventory management. Additionally, according to our informants, there are no local plastics quality control labs. Firms with the technical capability do their own testing in house, but other firms may not be carrying out these checks; accordingly, there may be an opportunity to establish a local lab.

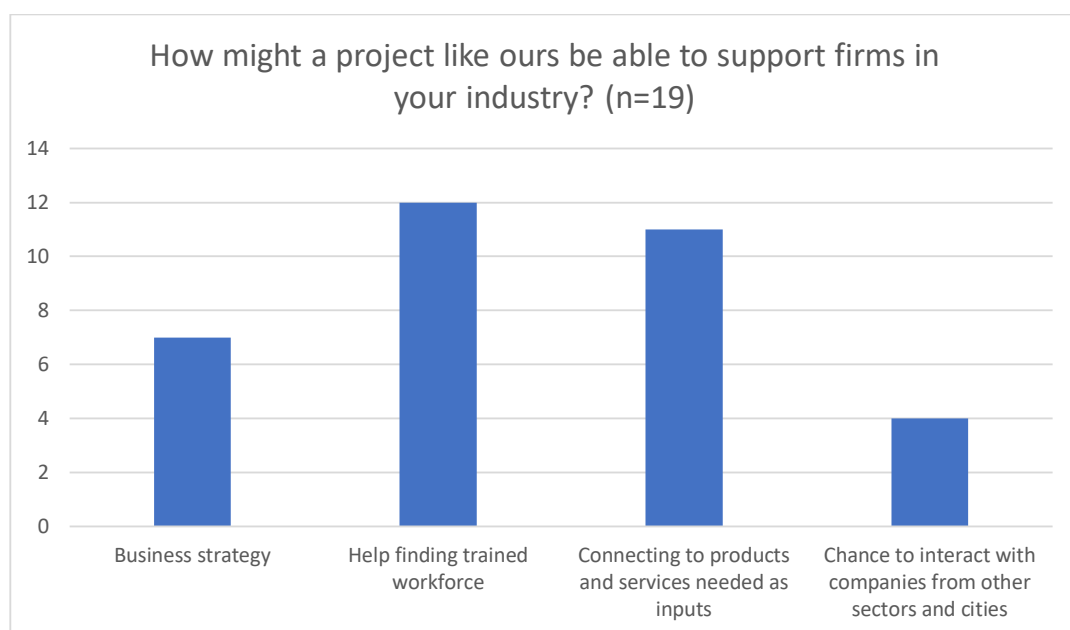
Conclusions

Analysis of needs to support SME business growth across the three sectors

In addition to the specific themes which surfaced in each of the sectors covered in this report, common issues may be identified by looking across the three. For example, price increases were mentioned as an issue by SMEs in construction materials and plastics. Access to raw materials also was seen as a challenge by SMEs in agribusiness/food processing and plastics. These themes should be explored further in conversation with the businesses, but SMEs in these sectors may benefit from broader access to inputs.

Analysis of opportunities across the three sectors

When asked how the project could help firms in their industry, a majority of firms mentioned help finding a trained workforce and connecting to inputs, needs which align with the primary activities of the project. Business strategy and the opportunity to interact with other firms were less of a priority, although this project will still provide business strategy support.



Demand-driven training and recruitment

The majority of firms interviewed reported that employment and revenue had increased over the past 5 years, and that they expected to hire young people in the coming year. Across the three sectors, machine operators and machine operator assistants; cooks and high oven temperature operators; and sales agents were mentioned the most frequently. Other positions mentioned multiple times included quality control agents; managerial positions, team leaders, and supervisors; and mold mixers. Of the positions with likely upcoming opportunities for youth, roles in which women currently work include sales, quality control, marketing, packaging, and preparer.

Specifically, in **agribusiness/food processing**, firms expected to hire for the following positions in the coming year:

- ◆ Machine operator (to operate or tend equipment to prepare food products).
- ◆ Packaging agent (to pack or package materials by hand or machine)
- ◆ Cooker / High temperature oven operator (to operate or tend food roasting, baking or drying equipment)
- ◆ Preparer (to mix raw materials)
- ◆ Mold mixer (to set up and operate equipment that mixes or blends ingredients, pour into molds, and place into oven)
- ◆ Food processor (general tasks to prepare food products)

Additional recruitment and training needs were identified for veterinarians and marketing and sales agents.

In **construction materials**, employers expected to hire young people in roles including:

- ◆ machine and high temperature oven operator (to operate machines to e.g. crush material and shape, form, and fire products such as tile)
- ◆ quality control (to conduct tests to determine quality of raw materials, intermediate and finished products)
- ◆ management (to plan, direct, or coordinate operations)
- ◆ marketing (to plan, direct, coordinate, and carry out marketing policies and programs)
- ◆ sales agent (to sell goods to businesses and consumers)
- ◆ welding (to use hand-welding or flame-cutting equipment to weld or join metal components or to fill holes, indentations, or seams of metal products)

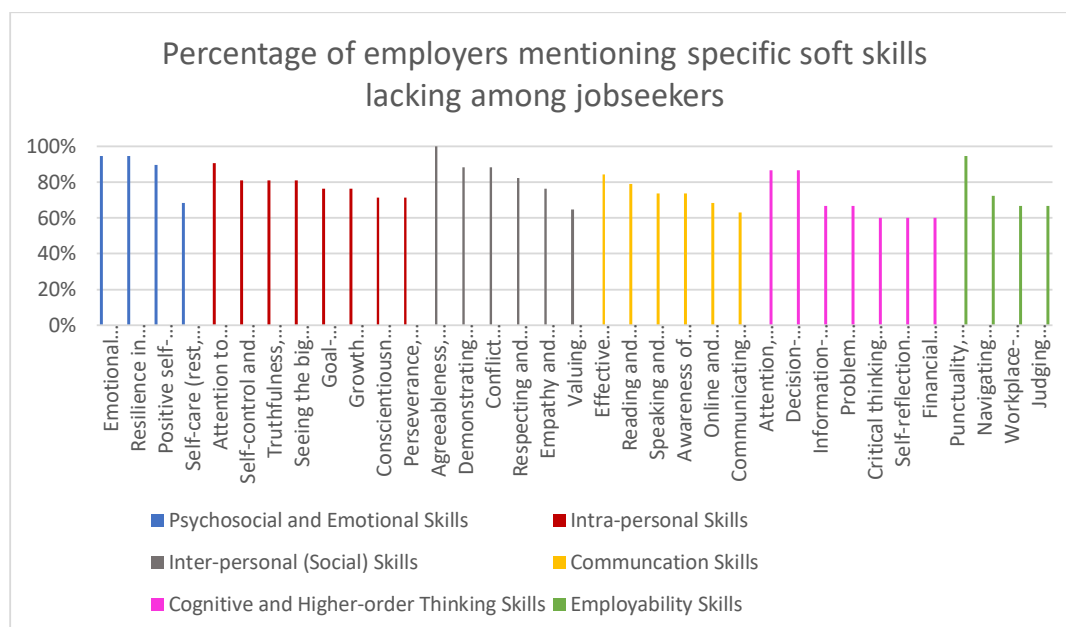
Additional opportunities may lie in product innovation (*e.g. design and engineering*).

In **plastics**, firms expected to hire for the following roles:

- ◆ machine operators and assistants (to set up, operate, or tend machines to mold or cast plastic parts or products, and to assist in doing so)
- ◆ production engineer (to design, integrate, or improve manufacturing systems or related processes)
- ◆ production technician (to set up, test, and adjust manufacturing machinery or equipment)
- ◆ electrician (to install, maintain, and repair electrical wiring, equipment, and fixtures)
- ◆ turner (to set up, operate, or tend lathe and turning machines to turn, bore, thread, form, or face plastic materials)
- ◆ quality control (to conduct tests to determine quality of raw materials, intermediate and finished products)
- ◆ sales agent (to sell goods to businesses and consumers)
- ◆ merchandiser (to be responsible for product appearance, supply, and placement in stores)

When asked about which soft skills young job seekers lack, the areas of greatest need appear to be psychosocial and emotional skills; intrapersonal skills; interpersonal skills, and communication skills. The most frequently mentioned skills were attention to detail (*19 respondents*); emotional intelligence (*18*); resilience in the face of setbacks (*18*); punctuality, work planning and meeting deadlines (*17*); agreeableness, flexibility and collaboration (*17*); truthfulness/honesty/integrity (*17*); seeing the big picture (*17*); self-control and self-discipline (*17*); and positive self-concept, self-efficacy, and confidence (*17*). In addition to the above-mentioned skills, the majority of other soft skills listed were also mentioned by most respondents.

The soft skills that are apparently slightly more prevalent among young jobseekers (*reflected in the fact that they were mentioned by a lower percentage of the participants*) included most of the skills in the cognitive and higher-order thinking realm.



Examples given of technical skills lacking in young jobseekers included automation, industrial drawing, and molding skills.

New business creation to supply B2B products and services across the three sectors

According to our research, looking across the opportunities listed under each of the sectors, there may be opportunities to develop cross-sectoral supporting youth-led businesses in the following areas:

- ◆ Raw materials supply – selling domestically-produced inputs (e.g. water tanks, fruit) to firms
- ◆ Waste collection and sales – collection, sorting, cleaning, aggregating, transporting, and selling various waste products for use as inputs into the production process
- ◆ Marketing – helping businesses expand their market reach, including through physical and online presence

Additional business-to-business needs, which may be better met by more experienced entrepreneurs, include:

- ◆ finance
- ◆ training
- ◆ management and organizational services
- ◆ import/export consulting

Specifically, in **agribusiness/food processing**, B2B opportunities potentially include:

- ◆ recycling and recovery of waste materials, for example to be used as fish or animal food, energy sources, or fertilizer
- ◆ raw materials and input supply, for example of sugar alternatives

In **construction materials**,

- ◆ market research to help SMES better understand the nature and scale of demand for particular products and styles
- ◆ designing and producing packaging that can help SMEs better differentiate and demonstrate the quality of their products
- ◆ merchandising of products to ensure that they are stocked, in good shape, and prominently located and featured in wholesale and retail locations

In **plastics**,

- ◆ collection and sales of waste plastic to manufacturers producing products from recycled plastic

- ◆ plastic processing machine maintenance and repair
- ◆ design, installation, servicing, and maintenance of computer systems
- ◆ providing external quality testing of products for firms that don't have the in-house capacity

New Opportunities and Changes related to the COVID-19 Pandemic

The global COVID-19 pandemic, which has significantly constrained economic activity around the world including in Algeria, is likely to have significant impact on industry prioritization, training and recruitment needs, and B2B opportunities throughout the lifetime of this project. Following are some of the near-term predictions being made,¹⁴ which should shape project-level decisions.

Assumptions/Predictions	Significance for the Algeria E&E Project
1. Remote work is likely to experience a lasting boost around the world, even after in-person work is possible again, as this period has removed some normative barriers to the practice as well as shifting skills and work habits in this direction. Companies also likely to shift even more towards remote freelancing.	<ul style="list-style-type: none"> • Train youth in a variety of digital skills related to remote work and technical support of remote work, remote education, and e-commerce platforms, even if not directly indicated by the priority sector research in this document.
2. Use of courier services of many types (food and grocery delivery, consumer product delivery, etc) has increased and will likely stay strong. Warehousing and bulk transport demand will increase alongside this. Consumer demand for products will change from pre-pandemic.	<ul style="list-style-type: none"> • Algeria lacks e-payment options but may shift in this direction, which would benefit other sectors of the economy as well: youth can be trained ahead of time with these skills • Otherwise, courier-related companies are not export-oriented and so would not usually have been included in the E&E project. If we choose to target such companies as an additional employment option, ensure adequate OSHA training for new pandemic risks.
3. Manufacturing, construction, and outdoor work including agriculture may still be possible but will require significant work re-organization to safeguard employees and abide by social distancing policies, which may take time. Manufacturing related to health needs is likely to be particularly strong, though challenged by social distancing measures (e.g. PPE manufacturing, medications, etc). Other sectors such as automotive will decline.	<ul style="list-style-type: none"> • If they are to survive, manufacturing sectors indicated by this project research may need support in re-organizing their production systems. • Agri-business, plastics, pharmaceuticals, and IT remain good sectors to support although perhaps with shifted product demand and work requirements (such as plastics shifting to produce non-woven plastics for medical PPE purposes). Training in technical skills for these sectors may be difficult currently, however. • There may be additional hiring in medical supply firms such as GE Healthcare, which has plants in Algeria • There may additionally be new needs for commercial agents as the government relaxes or changes import and export regulations around medical equipment, however youth may not have the needed skillset • Construction may be a less promising sector.
4. Retail trade, accommodation, food services, tourism, and commercial air travel will be some of the hardest-hit sectors and will take a long time to recover, if at all.	<ul style="list-style-type: none"> • These sectors were not prioritized for the Algeria E&E project.
5. Lower-paid work and work that in many economies is primarily performed by women will suffer some of the greatest jobs losses.	<ul style="list-style-type: none"> • The Algeria E&E project may have challenges meeting its targets for % female and % non-diploma holders. There is a need to study options for these populations specifically.

Overall, additional COVID-19 related training needs not identified previously and focusing on support for remote work and e-commerce as a new priority sector include:

- ◆ Traditional BPO fields, including accounting, billing, health records, data processing, technical support, technical writing, translation, transcription, customer service, and sales
- ◆ IT engineers managing networks, web-based work platforms, e-learning, e-commerce, and e-payment/mobile money platforms
- ◆ Web developers

¹⁴ See, for example: McKinsey & Company, 2020. COVID-19 Briefing Materials, Updated March 25, 2020. Brookings, 2020, When face-to-face interactions become an occupational hazard: Jobs in the time of COVID-19.

- ◆ Social media and online marketing managers
- ◆ Graphics design, video editor, animator
- ◆ Creation of online education content, management of online learning sites
- ◆ Health & safety managers, particularly for re-orienting production systems to comply with social distancing

In addition to being a potential area for training and recruitment, HSE advising could become a newly important area for B2B enterprise incubation.

Policy Issues

Throughout the course of our research, we identified several key policy and regulatory issues that, while outside the scope of our project, could be addressed in the longer run to support growth and exports among Algerian SMEs. An overwhelming majority of firms across all sectors reported regulatory (*e.g. payment, imports, production, hiring*) issues. Additionally, actors in the construction materials and plastics sectors both also mentioned financing as a challenge to growth and exporting.

A key challenge we encountered is that the Algerian dinar is non-convertible, meaning that it is illegal to take more than 10,000 dinars (*the equivalent of US\$80*) out of the country except in specific permissible situations (*e.g. importing certain goods*). However, it is difficult to receive permission to do so, and there is a cap by sector on the total amount which can be transferred. It is even more difficult to get an exception to buy non-tangible services abroad, such as registration fees to open an international office, which is required to export certain goods. There is a project in process to open Algerian banks abroad to facilitate the process, but this has been in the works for several decades.

Next Steps

In summary, the research has identified a number of recruitment and training opportunities, and potential youth-led business opportunities, within and across the three selected sectors. More analysis, however, will be necessary to understand how these opportunities may be impacted by the COVID-19 pandemic, and what additional challenges and opportunities the situation may present for Setif's economy and youth, as well as how needed training might be carried out in a virtual environment.

SME priority partners

Building on the findings from this report, a call for applications has been issued to engage SMEs from these three sectors to participate in business growth acceleration planning workshops. Originally these had been planned as in-person sessions to be carried out with previously selected SMES, but due to the coronavirus pandemic these workshops will be conducted virtually as a series of email tutorials and video sessions, and will include one-on-one support from an expert for approximately 5 SMEs. The objective is for at least 5 SMEs to participate from each site, and these will be identified as applications are received. SMEs may come from any of the three priority sectors in each site, which means that not all sectors will necessarily be represented. Given the circumstances, the project is considering offering the virtual sessions to SMEs outside of the priority sectors as well.

Annex A: Economic Opportunity Analysis Methodology

Background

World Learning is implementing the Algeria Entrepreneurship and Employment Project, funded by the Middle East Partnership Initiative (MEPI) of the U.S. Department of State. Based on our extensive experience in Algeria, World Learning and our local partner, the Algerian Center for Social Entrepreneurship (ACSE), propose to promote economic diversification and opportunities for Algerian youth in high-potential knowledge- and technology-based fields, according to the following theory of change:

IF 25 promising SMEs in targeted non-hydrocarbon knowledge- and technology-based sectors receive business acceleration support that enables them to better identify and address their recruitment, supply chain, and core growth needs,

AND IF 1,300 young women and men aged 20-35 receive high-quality demand-driven training to fulfill targeted SME and larger firms' growth needs in non-hydrocarbon sectors,

AND IF youth incubate 30 small businesses that respond directly to known business demand in Innovation Hubs that also build a foundation for developing future entrepreneurial talent,

THEN more youth will be employed in higher-earning jobs and businesses, and the country's path to economic growth through diversification will be supported,

ASSUMING that the current political instability remains within manageable levels and the government remains supportive of economic diversification.

Our approach is strategically focused on the start-up of new youth-led enterprises, alongside increasing the market for youth skills and products through supporting the growth of existing non-hydrocarbon SMEs. This dual strategy is the key to Algeria's ability to diversify its economy with knowledge- and technology-based sectors, to improve economic stability and employ more young Algerians.

For this project, we use Algeria's own definition of SMEs (*adopted from the European Union*) as having fewer than 250 employees and a total turnover of less than DZD 2 billion per year. This definition includes the large majority of enterprises in Algeria, but excludes some companies—particularly multinational corporations.

Business Size	Number or Employees	Total Turnover (DZD)	Total Balance Sheet (DZD)
Micro	1 - 9	≤ 20 million	≤ 10 million
Small	10 - 49	≤ 200 million	≤ 100 million
Medium	50 - 250	100 million - 2 billion	100- 500 million

Source: MISMEP (2012a).

15

15 Cited in Aissa Mosbah, 2014. Development of Algerian SMEs in the Age of Globalization. https://www.researchgate.net/publication/262105394_DEVELOPMENT_OF_ALGERIAN_SMEs_IN_THE_AGE_OF_GLOBALIZATION

Purpose of the Economic Opportunity Analysis and Supply Chain Mapping Studies

For each site involved in the project, beginning with Algiers and Setif, we will undertake a desk review and field research, primarily with private sector representatives, to produce a report (*one per site*).

1. For each site, the report will include
 - a. Identifying three priority industry sectors, based on a review of available economic data
 - b. Mapping the supply chains within those three priority industry sectors, including the identification of specific business names, based on primary data collection
2. These analyses will lead to the identification of:
 - b. 5 small and medium enterprise (SME) partners per site that demonstrate the potential for employment and business growth, based on their priority positions within the targeted industries' supply chains
 - b. Priority areas for demand-driven training of youth to meet the needs of these specific SMEs, as well as the broader industry sector (*this includes larger enterprises that may be able to employ more youth at one time*)
 - c. Key gaps in the supply chain or in support services that may represent opportunities for new business start-up

Process Overview

We will proceed according to the following steps (*to be further detailed before finalization of research methods and tools*).

1. Collect available data and studies on the industries in Algiers and Setif, to make a preliminary determination of 5-6 priority industry sectors or more specific value chains per city.
2. Conduct background interviews with key brokering stakeholders in each city, including chambers of industry and business associations to narrow down initial sector identification
 - a. Select 3 final industry sectors or specific value chains to focus on as the most promising
3. Map supply chains, for each of the three priority industry sectors, in each city
 - a. Conduct 10-15 interviews with small, medium, and large enterprises working in that sector (*proposed sample size may be adjusted*)
 - b. Focus questions on:
 - i. Potentials and plans for growth
 - ii. Recruitment needs and skills gaps
 - From this information we may identify demand-driven training and recruitment opportunities for youth
 - iii. Key constraints they face, particularly constraints to growing their market share, exports, and consequently being able to hire more people
 - From this we may identify some bottlenecks or missing products and services that a youth-led business could help meet
 - iv. Supply chain linkages (*which specific players are connected with which others through relationships of supply and purchasing at all points along the value chain in this industry sector*)
 - From this, we need to be able to diagram the relationships and identify some key players that we could support through our project
4. Write up one report for each city that includes:
 - a. The identified industry sector priorities and rationale behind them
 - b. 3 supply chain maps, one for each of these sector priorities
 - i. Identification of 5 SME priority partners to support in each city (*these could all be from one supply chain, if one seems most promising, or distributed among two or three supply chains*)
 - c. Analysis of needs to support SME business growth
 - d. Analysis of opportunities in:
 - i. Demand-driven training and recruitment
 - ii. New business creation

Research Phases in Detail

Phase 1: Preliminary sector selection

Collect available data and studies on the industries in Algiers and Setif, to make a preliminary determination of 5-6 priority industry sectors per city.

Initial criteria include:

1. Non-hydrocarbon/non-petroleum sectors
2. Included among government-identified priority industries, if possible (the government's current seven priority industries for diversification and development country-wide are: iron and steel; mechanical and metals; electrical and electronics; agri-business; manufacturing; chemicals, plastics, and pharmaceuticals; and construction materials)¹⁶
3. Show recent growth and potential to grow further, including potential for increased export to become a source of non-petroleum export revenue for the country
4. Have a notable presence of SMEs, not just a few large firms
5. Have the potential to employ youth

In general, we have not been able to identify a source of wilaya-level economic, SME, and labor force participation data. As a result, for this initial selection we have relied on our own prior research findings as well as additional sources such as economy news articles, online job postings, and some less specific government profiles of each wilaya.

Initial sector list for Setif

Based on World Learning's recent labor market analysis in Setif under the Youth Employment Project (YEP)¹⁷, likely possibilities include:

1. Agri-business: including possibilities in dairy, animal fodder, olives, figs; integrated farming
2. Food processing
3. Plastics (2,000 companies in Setif)
4. Consumer electronics (to find out if this is large-company dominated, or not)
5. Construction materials production (e.g. gravel, cement, tiles & flooring)

Setif does have petrochemicals industry but removed this due to MEPI's desire to focus on non-petroleum industries. We will nonetheless confirm with MEPI whether companies producing petrochemicals

and derivatives like fertilizer could be included in this project or not.

Initial sector list for Algiers

Based on some initial market analysis in Algiers, using recent economy news articles and statistics available online,¹⁸ as well as a rough analysis of online job board postings,¹⁹ we suggest a preliminary investigation of:

1. Agribusiness (possibly declining in Algiers)
2. Food processing
3. ICT
4. Pharmaceuticals (companies may be too large?)
5. Medical equipment & supply
6. Metal works & construction materials (companies may be too large?)

Our information on Algiers is less reliable than that on Setif; nonetheless the Background Interviews phase should allow us to confirm or revise this list and narrow it down to the top three sectors.

¹⁶ Oxford Business Group, 2018. Algeria's industrial policy of small business creation and local integration. <https://oxfordbusinessgroup.com/overview/productivity-boost-industrial-policy-focuses-facilitating-small-business-creation-and-raising-local>

¹⁷ Rather than doing further background research on Setif, for which there is little published information available on the internet, we can use the existing LMA data to justify this initial selection when writing the final report. Consult the YEP Final Report folder to find it.

¹⁸ <http://www.andi.dz/PDF/monographies/Alger.pdf>

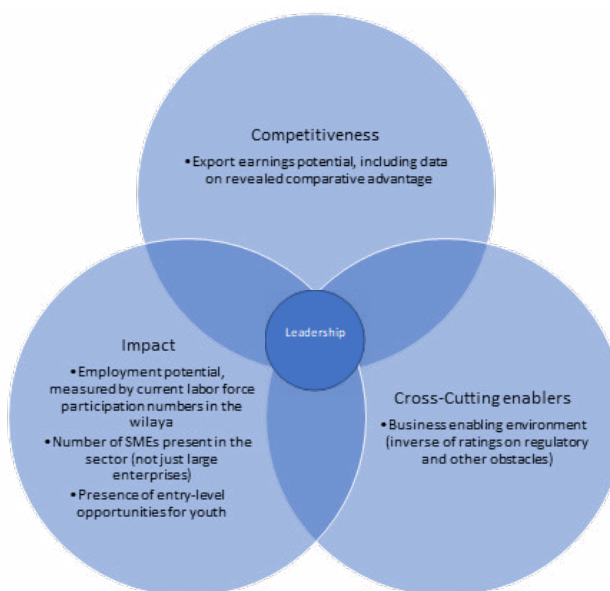
¹⁹ <https://www.emploiatic.com/>

Phase 2: Background Interviews

Conduct background interviews with key brokering stakeholders in each city, to gather further data and narrow down the initial sector identification

We will apply a streamlined version of USAID's value chain selection approach²⁰ to narrow these options to the 3 industry sub-sectors or more specific value chains that are the most promising, based on four major criteria: competitiveness (*in the context of the E&E project, we are most interested in export revenue potential*), impact (*here, in terms of SME growth and youth employment potential*), cross-cutting enablers (*in the Algerian context, focusing on sectors with relatively lower bureaucratic and regulatory obstacles*), and leadership (*the willingness of lead firms or a formal or informal industry association to invest time and effort in increasing value chain competitiveness*).

Background interviews in both Algiers and Setif will focus on gathering quantitative and qualitative data on these indicators to make a final selection of three industry sub-sectors per site. Note that this selection process is intended to be rapid and based on well-recognized issues within each project site. As USAID guidance states, *"An overly detailed or exhaustive selection process can preempt the value chain analysis, add complexity without adding value, and significantly increase the cost of the selection process."*²¹



Sample

Target a total of 10 background interviews in each city. Interview subjects should be stakeholders with well-informed perspectives about the local economy as a whole, not just about a single sector.

Examples include:

- ◆ Chamber of commerce representatives
- ◆ Industry association representatives
- ◆ ANEM or other active labor market agency or relevant government agency representatives
- ◆ Academics, think tank researchers, or other organizations studying the local economy
- ◆ Export agencies

Background interview protocol (Setif)

[Interviewer: Introduction and consent statement to be read out loud] *"I am a representative of World Learning, a global non-profit organization. World Learning is implementing the Algeria Entrepreneurship and Employment Project to promote economic diversification and opportunities for Algerian youth in non-petroleum based industry sectors. We would like your input on which industry sectors in this city offer the most potential for increased youth employment. We will not use your name in our report, but will combine your responses with others so that we can choose the best focus for our project. The overall report will be shared with project staff and participants as well as stakeholders in each city like yourself. Are you willing to participate in this interview?"*

[Interviewer: Provide your contact information in case of later questions about the study or project. Proceed only if consent is given based on the above information.]

1. Interviewee organization/institution:_____

²⁰ See USAID MarketLinks guidance: <https://www.marketlinks.org/good-practice-center/value-chain-wiki/value-chain-selection-overview>

²¹ <https://www.marketlinks.org/good-practice-center/value-chain-wiki/value-chain-selection-overview#criterion-1>

2. Interviewee title: _____

3. Interviewee contact information for future project event invitations: _____

[Interviewer: Further introduction to read out loud] *"We are interested in identifying non-petroleum industry subsectors with the potential to increase their exports, with opportunities to employ a higher number of youth, with relatively fewer bureaucratic and regulatory barriers, and with particular companies or associations that are taking leadership to increase the sector's competitiveness."*

4. What do you think are the sectors in Setif that best meet the above criteria?

5. Based on our initial research, we had tentatively identified the following industry sectors as having significant potential in Setif:²²

- ◆ Agri-business
- ◆ Food processing
- ◆ Plastics
- ◆ Consumer electronics
- ◆ Construction materials production

Do you agree that these are the most promising industry sectors in Setif, based on the criteria I mentioned earlier? Is there anything we have forgotten from this list? [Select one response]

1. This list is complete
2. This list is missing an important local industry/industries (specify below): _____

[Interviewer: If the subject adds one or more industries in #4 or 5.b. above, you should include those in your questions about ranking below, so that you refer to the complete list each time. Note the blank lines in the following table are provided for that purpose, for example]

6. Could you please tell me a bit more about each of these industry subsectors? What are the major Setif-based companies in each subsector and what products do they produce?

Industry Sub-Sector	Companies	Products
Agri-business		
Food processing		
Plastics		
Consumer electronics		
Construction materials		

²² Note that this protocol is specific to Setif as we do not yet have the list available for Algiers.

[The below table is for recording all ranking responses. Add other industry sectors if necessary.]

Industry Sector	Competitiveness	Employment Impact Potential		Enabling Context	Leadership
	Interviewee Rank: Export growth potential (Q7)	Interviewee Rank: SME participation (Q8)	Interviewee Rank: Youth employment (Q9)	Interviewee Rank: Fewest bureaucratic/ regulatory barriers (Q10)	Interviewee Rank: Committed leadership (Q11)
Agri-business					
Food processing					
Plastics					
Consumer Electronics					
Construction materials					

7. Now I would like to ask you to rank these industry sectors according to some different criteria. First, which of these industry sectors do you think offers the most potential for **increasing export revenue? How would you rank the others relative to this one? Please put them in order from highest export potential (#1) to lowest export potential (#5 or highest number cited).**

[Interviewer: Note that you will be recording all of their ranking responses to this and the following questions on the above table. Ensure that you assign the #1 to the highest potential sector, and then subsequently rank each of the others. Below, you can record any additional qualitative details the interviewee provides while considering their ranking response.]

[additional comments, including responses to “why”?]

8. Which of these industry sectors has the highest number of small and medium enterprises (SMEs) involved in it, rather than just a few large companies? How would you rank the others relative to this one? Please put them in order from **highest number of SMEs (#1) to lowest.**

[Interviewer note: Even if all sectors are dominated by SMEs, a sector with 900 firms should be ranked higher (#1) than a sector with just 50 firms]

[additional comments]

9. Which of these industry sectors offers the most entry-level jobs, which youth could access? How would you rank the others relative to this one? Please put them in order from **highest youth employment potential (#1) to lowest.**

[additional comments]

10. Which of these industry sectors has the fewest bureaucratic or regulatory barriers; in other words which has the best enabling environment to operate and grow? How would you rank the others relative to this one? Please put them in order from **fewest obstacles (#1) to the most.**

[additional comments]

11. Which of these industry sectors has the most committed leadership trying to promote improved competitiveness and increased exports? How would you rank the others relative to this one? Please put them in order from **most committed leadership (#1) to the most.**

[additional comments]

12. Based on the discussion we have had so far, what are the top three industry sectors you would recommend that we focus on for our project in Setif?

- If there are more specific sub-sectors within these that you recommend we focus on in Setif, please mention those in addition to the broader sector.
- What are some of the companies that you recommend we speak to within each sub-sector, in order to learn more? Could you introduce us to any contacts there?

Top 3 Industry Sub-Sectors	Recommended companies to contact & Contact persons

Thank you very much for your time and for the perspectives you have shared.

Phase 3: Private sector interviews & supply chain mapping

Map supply chains, for each of the three priority industry sectors in each city and determine which SMEs to support through the project.

Focus questions on:

- Potential and plans for growth, recent growth/investment
- Supply chain linkages (*which specific players are connected with which others through relationships of supply and purchasing at all points along the value chain in this industry sector*)
 - From this, we need to be able to diagram the relationships and identify some key players with important growth potential that we could support through our project
- Recruitment needs and skills gaps
 - From this information we may identify demand-driven training and recruitment opportunities for youth
- Key constraints they face, particularly constraints to growing their market share, exports, and consequently being able to hire more people
 - From this we may identify some bottlenecks or missing products and services that a youth-led business could help meet

Sample

In each selected sub-sector:

- 1-2 interviews with industry/association representatives
- 8-9 interviews with small, medium, and large enterprises working in each identified priority sub-sector
- For a total of 10 interviews per sector, and 30 interviews per city.
 - a. Begin with the industry/association representatives and ask them to identify lead firms and SMEs
 - b. Additionally, follow up on contacts provided during the background research phase
 - c. Ask for additional introductions to other companies identified within the above interviews
 - d. Reserve some time at the end to meet with any additional company that seems to occupy an important place in the supply chain based on others' feedback

Private Sector Focus Group Discussion Protocol (Industry/Sector/Subsector Level)

Researcher Name: _____ **Governorate:** _____ **Date:** _____

Provide written consent form to each member of the group. Also read it aloud (below). Have each participant provide their consent before proceeding.

Consent script:

Purpose You have been invited to participate in a focus group sponsored by World Learning, a global non-profit organization, under the direction of [NAME OF MODERATOR]. World Learning is implementing the Algeria Entrepreneurship and Employment Project to promote economic diversification and opportunities for Algerian youth in non-petroleum-based industry sectors. The purpose of this focus group is to find out more about your industry sector so that we can see how our project might support it through training and business growth advising. We would like you to participate in the discussion and share with us your experience, thoughts, and priorities.

Procedure As part of this study, you will be placed in a small group of individuals. A moderator or moderators will ask you several questions while facilitating the discussion. This focus group will be audio-recorded and a note-taker will be present. However, your responses will remain confidential, and no names of individuals or businesses will be published.

This is a totally voluntary exercise and you are free to refuse participation. You are also free to leave at any point of time during the discussion. You can also refuse to answer any question or query at any point of the discussion.

Please note that there are no right or wrong answers to focus group questions. World Learning wants to hear the many varying viewpoints and would like for everyone to contribute their thoughts. Out of respect, please refrain from interrupting others. However, feel free to be honest even when your responses counter those of other group members.

After the group discussion, we will ask you to fill out a questionnaire about your business. Again, your responses will be confidential, and will only be used internally to better understand how our project might support firms in this sector.

Benefits and Risks Your participation may benefit you and other firms by helping you to map opportunities and identify gaps and common obstacles across your industry in [WILAYA]. If you are interested, you may also receive training and business growth advisory services through the project. However, no risks are anticipated beyond those experienced during an average conversation.

Confidentiality Should you choose to participate, you will be asked to respect the privacy of other focus group members by not disclosing any content discussed during the study. Researchers within World Learning will analyze the data, but your responses will remain confidential, and no names of individuals or businesses will be published.

Contact If you have any questions or concerns regarding this study, please contact:

[CONTACT INFORMATION OF MODERATOR]

Focus Group Questions

1. To begin, could you give me an introduction to your industry sector?
 - a. What are the main products, and who are the major clients/customers for these products?
 - b. How long has this sector been in existence here in [wilaya]?
 - c. What is the estimated level of employment in this sector here in [wilaya]?
 - i. Has the number of employees increased or decreased in the last 5 years?
 - d. What is the estimated annual revenue of this sector here in [wilaya]?
 - i. Has revenue increased or decreased in the last 5 years?
 - e. [Any other information provided, such as industry's history, competitiveness/market share compared to rest of country, etc.]
2. I'm trying to understand better all the different actors involved in this sector, such as who supplies inputs to whom, and who buys outputs, transforms them, and brings them to market. Can you help me understand what are some of the main actors involved in these different stages? **(Show the draft/example supply chain map.)** We are going to update and refine this map as we discuss this topic.
 - a. Which actors generate the inputs or raw materials?
 - b. Which actors process the raw materials and transform them into a wholesale product?
 - c. Which actors are involved in getting this product ready for the market (*packaging, labeling, regulatory, legal processes, quality control, etc.*)?
 - d. Which actors are involved in transportation and distribution of this product?
 - e. Who is involved in the order-to-cash process?
 - f. Which actors provide services to actors in the chain: finance, accounting, security, IT, etc.?
 - g. Is there anything we left out of this chain?
3. What are the major constraints or obstacles the sector faces, which have made it difficult to grow in recent years?
 - a. [open response]
 - b. Are there any supplies or products that actors have trouble obtaining?
 - c. Are there any services that actors need better access to in order to operate their companies?
 - d. Are there any regulatory or bureaucratic obstacles the sector faces?
 - e. Do firms have any problems recruiting the workforce that they need?

Individual Private Sector Questionnaire (Firm Level)

Your responses will remain confidential, and no names of individuals or businesses will be published.

1. Interviewee Name: _____
2. Company or organization: _____ Industry Sector: _____
3. Position or title: _____
4. Contact information to invite you to project activities: _____
5. Could you give me an introduction to your business?
 - a. What do you produce, and who are the major clients/customers for these products?
 - b. How many different original products do you manufacture?
 - c. What are the external inputs? *E.g. Do you input raw materials, do you need the services of a lab?*
 - d. Can you describe your internal supply chain?
 - e. What are the external inputs once your product is manufactured?
 - f. What are the various ways your buyers communicate with you?
 - g. How do you respond (*e.g. through a sales force in the field, a secretary that watches a website, get an alert, buy a journal, go to trade shows? Do you send out samples, train doctors, go to congresses?*)
 - h. What are the steps you take to internally process an order, up to closing an invoice? If you are buying rather than selling, is the process the same?
 - i. How long have you been in business?
 - j. How many employees do you have, and what are their different roles?
 - Has your number of employees increased or decreased in the last 5 years?
 - k. What is your annual revenue?
 - Has your revenue increased or decreased in the last 5 years?
 - l. Please share any other relevant information, such as company's history, market share, etc.

6. What positions in your company do you expect to be open to young people in the coming year?

Name of position	Type of position (internship, part time, full time, seasonal, irregular)	Do women work in this position?	What is the minimum education level required?	Does this position require a technical background?

7. What were the characteristics/skills of the last successful entry-level employee you hired?

8. Which of the following soft skills is usually missing from young people you have interviewed or hired?

A. Psychosocial and Emotional Skills	D. Communication Skills
<input type="checkbox"/> Self-care (rest, nutrition, exercise); Making healthy choices	<input type="checkbox"/> Effective listening and understanding others' perspectives
<input type="checkbox"/> Emotional intelligence; Managing emotions	<input type="checkbox"/> Reading and writing: written communication
<input type="checkbox"/> Positive self-concept, self-efficacy, confidence	<input type="checkbox"/> Speaking and presenting: oral communication
<input type="checkbox"/> Resilience in the face of setbacks; Coping with stress	<input type="checkbox"/> Online and digital communication
B. Intra-personal Skills	<input type="checkbox"/> Awareness of non-verbal communication norms and cues
<input type="checkbox"/> Self-control and self-discipline	<input type="checkbox"/> Communicating across ages, genders, cultures, or identities
<input type="checkbox"/> Conscientiousness, reliability/dependability, responsibility	E. Cognitive and Higher-order Thinking Skills
<input type="checkbox"/> Truthfulness, honesty, integrity, and trustworthiness	<input type="checkbox"/> Attention, focus, memory, and concentration
<input type="checkbox"/> Attention to detail and/or Seeing the big picture (specify)	<input type="checkbox"/> Critical thinking and evaluation
<input type="checkbox"/> Goal-orientation/goal-setting, self-motivation	<input type="checkbox"/> Information-seeking and independent learning
<input type="checkbox"/> Perseverance, determination, and grit	<input type="checkbox"/> Problem analysis, problem-solving, synthesis, creativity
<input type="checkbox"/> Growth mindset, and recognizing need for improvement	<input type="checkbox"/> Decision-making and planning
C. Inter-personal (Social) Skills	<input type="checkbox"/> Self-reflection and learning from experience
<input type="checkbox"/> Demonstrating context-appropriate behavior	<input type="checkbox"/> Financial literacy, budgeting, and financial management
<input type="checkbox"/> Respecting and expressing appreciation for others	F. Employability Skills
<input type="checkbox"/> Empathy and ability to notice the effects on others	<input type="checkbox"/> Workplace-appropriate verbal and written communication
<input type="checkbox"/> Valuing diversity of perspectives	<input type="checkbox"/> Navigating workplace roles and relationships
<input type="checkbox"/> Conflict management and resolution; Fairness	<input type="checkbox"/> Judging appropriate styles of dress and grooming
<input type="checkbox"/> Agreeableness, flexibility, collaboration, and teamwork	<input type="checkbox"/> Punctuality, work planning, and meeting deadlines

9. Is there anything missing from the above list? What is it?
10. What are some technical or occupation-specific skills that are usually missing from young people you have interviewed or hired?
11. Are there other challenges you face in hiring young people? If so, what are they?
12. Which firms in this sector would you suggest that we meet with to get more information? Please share contact information.
13. How might a project like ours be able to support you? If you are selected, we will be offering help with business strategy, help finding a trained workforce, help connecting you to products and services you need as inputs, and opportunities for interaction with other Algerian companies interested in strategic growth. (circle options you are interested in)
 - a. Business strategy
 - b. Help finding trained workforce
 - c. Connecting to products and services needed as inputs
 - d. Chance to interact with companies from other sectors and cities

Individual Private Sector Questionnaire (Industry Representative Level)

Your responses will remain confidential, and no names of individuals or businesses will be published.

1. Interviewee Name: _____
2. Company or organization: _____ Industry Sector: _____
3. Position or title: _____
4. Contact information to invite you to project activities: _____
5. What positions in the sector do you expect to be open to young people in the coming year?

Name of position	Type of position (internship, part time, full time, seasonal, irregular)	Do women work in this position?	What is the minimum education level required?	Does this position require a technical background?

6. Which of the following soft skills is usually missing from young people seeking jobs in this sector?

A. Psychosocial and Emotional Skills	D. Communication Skills
<input type="checkbox"/> Self-care (rest, nutrition, exercise); Making healthy choices	<input type="checkbox"/> Effective listening and understanding others' perspectives
<input type="checkbox"/> Emotional intelligence; Managing emotions	<input type="checkbox"/> Reading and writing: written communication
<input type="checkbox"/> Positive self-concept, self-efficacy, confidence	<input type="checkbox"/> Speaking and presenting: oral communication
<input type="checkbox"/> Resilience in the face of setbacks; Coping with stress	<input type="checkbox"/> Online and digital communication
B. Intra-personal Skills	<input type="checkbox"/> Awareness of non-verbal communication norms and cues
<input type="checkbox"/> Self-control and self-discipline	<input type="checkbox"/> Communicating across ages, genders, cultures, or identities
<input type="checkbox"/> Conscientiousness, reliability/dependability, responsibility	E. Cognitive and Higher-order Thinking Skills
<input type="checkbox"/> Truthfulness, honesty, integrity, and trustworthiness	<input type="checkbox"/> Attention, focus, memory, and concentration
<input type="checkbox"/> Attention to detail and/or Seeing the big picture (specify)	<input type="checkbox"/> Critical thinking and evaluation
<input type="checkbox"/> Goal-orientation/goal-setting, self-motivation	<input type="checkbox"/> Information-seeking and independent learning
<input type="checkbox"/> Perseverance, determination, and grit	<input type="checkbox"/> Problem analysis, problem-solving, synthesis, creativity
<input type="checkbox"/> Growth mindset, and recognizing need for improvement	<input type="checkbox"/> Decision-making and planning
C. Inter-personal (Social) Skills	<input type="checkbox"/> Self-reflection and learning from experience
<input type="checkbox"/> Demonstrating context-appropriate behavior	<input type="checkbox"/> Financial literacy, budgeting, and financial management
<input type="checkbox"/> Respecting and expressing appreciation for others	F. Employability Skills
<input type="checkbox"/> Empathy and ability to notice the effects on others	<input type="checkbox"/> Workplace-appropriate verbal and written communication
<input type="checkbox"/> Valuing diversity of perspectives	<input type="checkbox"/> Navigating workplace roles and relationships
<input type="checkbox"/> Conflict management and resolution; Fairness	<input type="checkbox"/> Judging appropriate styles of dress and grooming
<input type="checkbox"/> Agreeableness, flexibility, collaboration, and teamwork	<input type="checkbox"/> Punctuality, work planning, and meeting deadlines

- 7.** Is there anything missing from the above list? If so, what is it?
- 8.** What are some technical or occupation-specific skills that are usually missing from young people seeking jobs in this sector?
- 9.** Are there other challenges the sector faces in hiring young people? If so, what are they?
- 10.** Which firms in this sector would you suggest that we meet with to get more information?
(Please provide contact information)
- 11.** How might a project like ours be able to support firms in this sector? If selected, we will be offering help with business strategy, help finding a trained workforce, help connecting firms to products and services they need as inputs, and opportunities for interaction with other Algerian companies interested in strategic growth. (circle promising options)
- a. Business strategy
 - b. Help finding trained workforce
 - c. Connecting to products and services needed as inputs
 - d. Chance to interact with companies from other sectors and cities

Annex B: Sector Analysis—Setif

Catherine Honeyman and Nora Sohnen
Based on research led by Mehdi Bentoumi

Sample

All interviewees were informed of the purpose of the research and gave their consent to participate, with the understanding that their comments would not be attributed to them by name.

4 employment institutions:

- ◆ ANEM for senior executives (unable to reach the general ANEM for lower level jobs and university teachers)
- ◆ ANSEJ
- ◆ ANGEM
- ◆ Labor Department

8 companies

- ◆ 2M Electronics
- ◆ Fit Pack
- ◆ Comet
- ◆ Brandt
- ◆ Bouras
- ◆ Fouara
- ◆ Agrofilm
- ◆ FADERCO

7 of the interviewees were HR Directors, 1 was a Recruitment Specialist, 3 were Directors, and 1 was the Chief of the Finances Department. Only 3 were willing to give their contact information to be invited to project events.

Note: Representatives from the Chamber of Commerce were unavailable, but researchers obtained the Chamber of Commerce's database of all companies in Setif as well as a list of all job offers in Setif..

Q4. Open-ended question about the most promising sectors

Sectors mentioned	Tally	# of mentions
Construction materials	11111111	8
Plastics	1111111	7
Food processing	111111	6
Electronics	11111	5
Agro-business	11	2
Micro-enterprise	1	1
Transformation	1	1
Production	1	1
Ceramics	1	1
Pneumatics	1	1
Packaging	1	1
Pharmaceuticals	1	1

Additionally, “ceramics” may in fact fall under “construction materials” in others’ minds, increasing this category’s prioritization still higher.

Q5. Other sectors we should be considering, not in our original list:

- ◆ Pneumatics (4 mentions)
- ◆ Medical materials (3)
- ◆ Packaging/printing (3)
- ◆ Pharmaceuticals (1)

Note our original list included the following:

- ◆ Agri-business: including possibilities in dairy, animal fodder, olives, figs; integrated farming
- ◆ Food processing
- ◆ Plastics (prior research indicates 2,000 companies in Setif)
- ◆ Consumer electronics (large-company dominated)
- ◆ Construction materials production (e.g. gravel, cement, tiles & flooring)

Q6. Sectors, Companies, Products

All in all, the complete list of sectors to consider is below, in a tentative order of priority based on open-ended responses (*#1 as the highest priority*), along with company and product examples:

Sector	Companies	Products
Construction materials production (e.g. gravel, cement, tiles & flooring)	Safcer 1 Safcer 2 Groupe Bouras Groupe Bouhadra	
Plastics (est. 2,000 companies in Setif)	Numidia Benkerfa Agrofilm Feedpack Kplast IGPS Lackplast SALIM Plast FILMO PLAST Aggoun Plast Agro Plast	Plastics transformation
Food processing	Global FCI Fouara MAMI SBC	Tuna, Sardines
Consumer electronics (to find out if this is large-company dominated, or not)	Iris Benkerfa Brandt	
Agri-business: including possibilities in dairy, animal fodder, olives, figs; integrated farming	[None listed]	
Pneumatics	Iris	
Medical materials	Salem	
Packaging/printing	General Emballage	
Pharmaceuticals	Labo Salem	

Q7-Q11

Only four interviewees responded to the ranking questions: the representatives from ANSEJ, ANEM, ANGEM, and the Labor Department. This appears to be because the other interviewees (*all representatives of companies except one(?)*) did not have enough information about a variety of sectors for comparison. Even the representatives of government agencies sometimes did not provide ranking answers, if they felt they did not have enough information about the sector/criteria to do so. This has resulted in incomplete data for ranking, though I have analyzed it below in any case for any additional insights it can contribute to the preceding table of interviewees' more instinctual prioritization of certain sectors.

Q7: Export Potential

In terms of greatest export potential, the 4 responding interviewees disagreed. One each gave the top place to:

- ◆ Agri-business
- ◆ Construction materials
- ◆ Consumer electronics
- ◆ Medical materials

Second place responses went to: Plastics (3/4), Agribusiness (1/4), Consumer electronics (1/4), and Construction materials (1/4).

Food processing was ranked roughly in the middle by all respondents, while the worst rankings went to pneumatics and agri-business; in other words, opinion on agri-business was quite divided. One interviewee commented that agri-business has a high potential to grow its exports because there is a lot of interest and assistance given to this sector—perhaps something that will show up further in the “*enabling environment*” or “*leadership*” questions. Another interviewee commented, “*although Setif has a big potential to grow in agri-business, the other sectors are ahead in export according to currently-exported products.*”

The straight average (*mean*) ranking outcome across these four respondents is presented further below in the Summary of Ranking section, showing **Construction Materials, Consumer Electronics, and then Plastics** as receiving the highest export potential rankings. Agri-business should most likely be placed at least fourth, given the preceding comments, despite the fact that a strict average of responses would place it tied for fifth with food processing.

Q8: High presence of SMEs

High presence of SMEs is one of our measures of employment growth potential. Three of the four responding interviewees classified agribusiness as having the highest number of SMEs; the fourth gave this top ranking to the Plastics sector (*which others placed as 2nd or 3rd*). All agreed that food processing should be given second place.

In terms of overall averages, below is the ranking of the top three; after this there is a fairly large gap:

1. Agribusiness
2. Food processing
3. Plastics

Q9: Volume of entry-level jobs

Another measure of employment growth potential in our model is volume of entry-level jobs that could be open to youth. Unfortunately, only three respondents answered this question as the others felt they did not have enough information to respond. High rankings for this factor were attributed to plastics, consumer electronics, and construction materials. According to the average of the three responses given, Consumer electronics and Construction materials are tied for the 1st ranking, with Plastics coming in third.

Q10: Enabling environment (comparatively fewer regulatory and bureaucratic obstacles)

As Algeria is an environment with significant regulatory and bureaucratic obstacles, these can be a hindrance to growth and a reason to prefer working with one sector over another. Unfortunately, only one interviewee gave complete ranking responses to this question while another gave partial responses.

According to this limited information, the best enabling environment exists for agri-business. All other industries face high obstacles, although this may be somewhat less for plastics. One interviewee commented, “*creating an agro-business company doesn't require any qualification nor special authorization. Also a plastic company requires only to be built far from residence area and agricultural places for health and environment safety.*”

Q11: Committed Leadership

A final ranking criterion is the presence of some form of leadership (*whether an industry body, a government agency, or a couple of leading companies*) working towards increased exports and improved quality. Only three respondents answered this question (*and even they did not rank every single sector*), and their consensus was that the greatest leadership exists in Consumer Electronics, followed by Construction Materials.

One interviewee commented that *“being confronted by international competition forces companies in electronics and construction materials to be innovative and open to improvement.”* Another agreed that these two sectors have the most modern facilities and technologies. He/she however also removed that *“the agribusiness sector is run by families mostly, although it does enjoy government support.”* Given the earlier comments on the amount of support given to growing the agribusiness sector, it should be placed 3rd in terms of *“leadership”* even if interviewees interpreted the question of leadership differently (*more in terms of quality improvement than drive to export*).

Q12: Interviewees’ final recommendations

After leading them one by one through our primary criteria, we asked interviewees a confirming question to determine which sectors they would finally recommend that we work with. We also asked for company recommendations, although only a few interviewees gave such information. The below table shows the responses from the 11 interviewees who responded (*of 12*).

Sector Priority #1	Sector Priority #2	Sector Priority #3
Medical materials	Pastics : Kplast	Construction materials
Construction materials (Ceramics) : Safcer1, Safcer2	Electronics : Iris, Brandt	
Electronics	Agro-business	Plastics
Construction materials	Plastic	Electronics
Construction materials	Plastic	Packaging
Plastic	Construction materials	Food processing
Construction materials	Electronics	Food Processing
Construction materials	Plastic	Pharmaceutical
Plastic	Construction materials	Food processing
Food Processing	Construction materials	Plastic
Electronics	Plastic	Construction materials

On this question, there appeared to be strong consensus over the following industries:

1. Construction materials (1st place 5 times, 2nd place 3 times, 3rd place 2 times—in other words mentioned as a top priority by nearly every respondent)
2. Plastics (1st place 2 times, 2nd place 5 times, 3rd place 1 time)
3. Consumer electronics (1st place 2 times, 2nd place 2 times, 3rd place 1 time)

Agribusiness and food processing, if considered as a potentially combined category also appeared multiple times, but with a lower overall ranking.

Revealed Comparative Advantage

A country has a revealed comparative advantage if its exports are greater than world exports of that product; in other words if the $RCA > 1$. If the RCA is less than one, the country has a comparative disadvantage in that export commodity. In other words, the higher the RCA, the better the sign of export potential. Information about RCAs for each country is available via the Observatory of Economic Complexity: https://oec.world/en/visualize/tree_map/hs92/export/dza/all/show/2017/

Because Algeria’s exports are highly dominated by mineral products (*petroleum gas, crude petroleum, and refined petroleum together make up 96% of all Algerian exports*), the country has little revealed

comparative advantage in any other product. Nonetheless, a comparison of RCAs across exports has the potential to yield additional ranking information for criteria important to this project.

Agribusiness and food processing are somewhat difficult to disentangle using the OEC data, which has the categories of *"Foodstuffs"* (overall RCA 0.24) and *"Vegetable products"* (RCA 0.35), both of which contain within them both unprocessed and processed food types. Additionally, the RCAs for specific products are very diverse, with high RCAs for tropical fruits (12.0), sugar cane (6.72), raw sugar (4.35), and pasta (1.47) far above the average for RCA for the larger categories. In the ranking table that appears later in this report, I have applied a simple average of the RCAs for the above four products (6.14) to both the agribusiness and food processing lines, since this appears more representative of the export potential for enterprises that are focusing on the correct export opportunities within the broader sectors. This method is debatable however, and could be revised if it appears to unfairly weight the overall rankings.

For plastics, I use the plastics and rubbers category (RCA 0.011) and for consumer electronics, I use the *"machines"* category (RCA 0.026). For construction materials, I use the stone and glass category, which includes ceramics (RCA 0.16). For pneumatics, I use the RCA for the specific category of automatic regulating or controlling instruments (RCA 0.0013) and for medical materials I use the RCA for instruments and appliances used in medical, surgical, dental, or veterinary sciences (RCA 0.0057).

Trade Share Analysis

An analysis of Algeria's vis-à-vis the world's export data from 2013-2017 shows that the relevant products (*2-digit*) which Algeria exported more than US\$1m in value in 2017, in which Algeria's market share is growing faster than average, and world demand is growing faster than average are the following (*upper righthand corner of the graph*) are the following:

Agribusiness and food processing:

- ◆ Essential oils and resinoids; perfumery, cosmetic or toilet preparations
- ◆ Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal ...
- ◆ Edible fruit and nuts; peel of citrus fruit or melons
- ◆ Preparations of vegetables, fruit, nuts or other parts of plants
- ◆ Cocoa and cocoa preparations
- ◆ Fish and crustaceans, molluscs and other aquatic invertebrates
- ◆ Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal ...
- ◆ Cork and articles of cork
- ◆ Sugars and sugar confectionery

ICT

- ◆ Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...

Pharmaceutical

- ◆ Pharmaceutical products

Construction materials

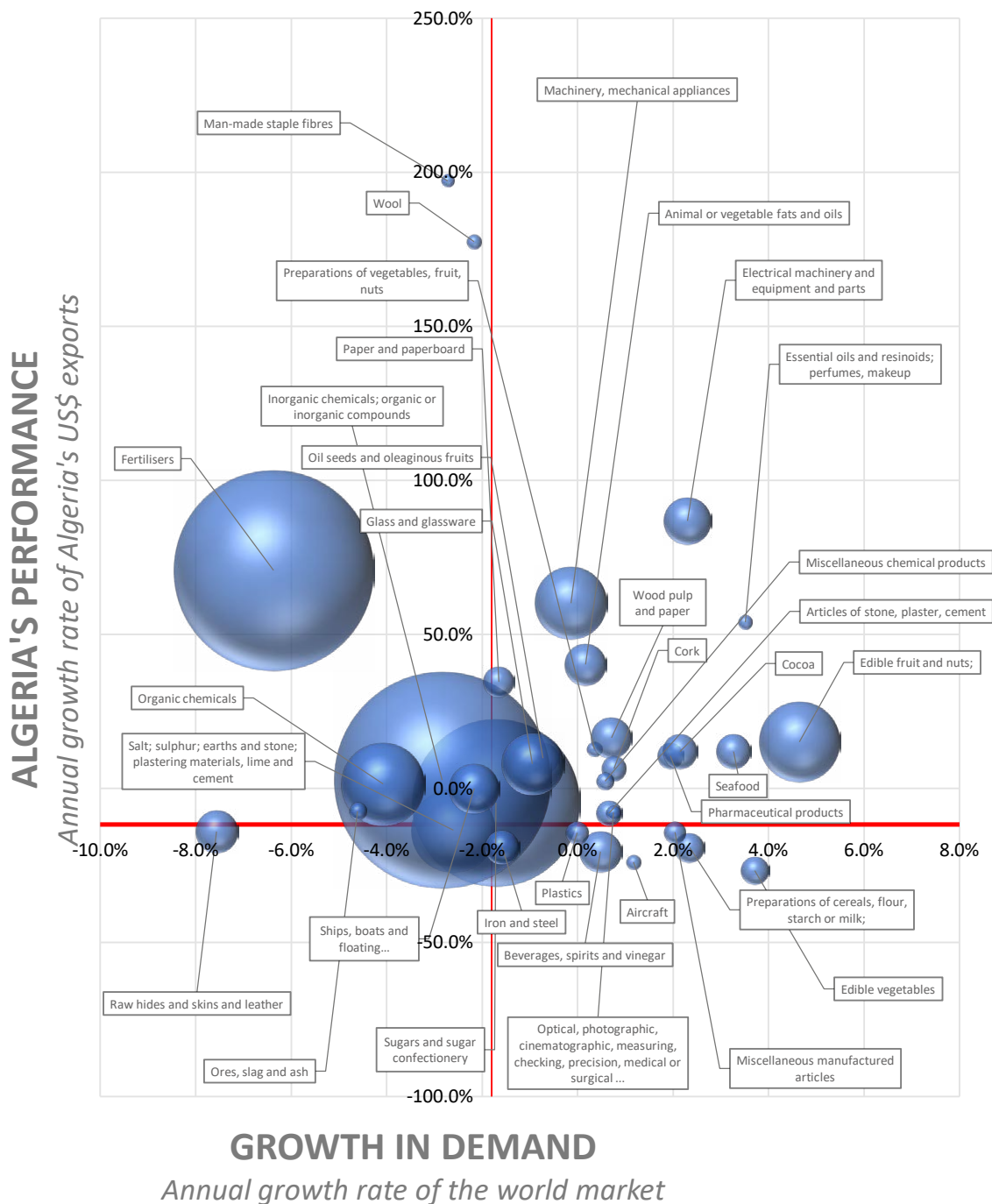
- ◆ Articles of stone, plaster, cement, asbestos, mica or similar materials
- ◆ Glass and glassware

Green sectors

- ◆ Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or ...

Medical materials/precision machining

- ◆ Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments



Substituting trade share analysis for the RCA analysis in the calculation did not change the ranking order of sectors.

Labor Force Participation

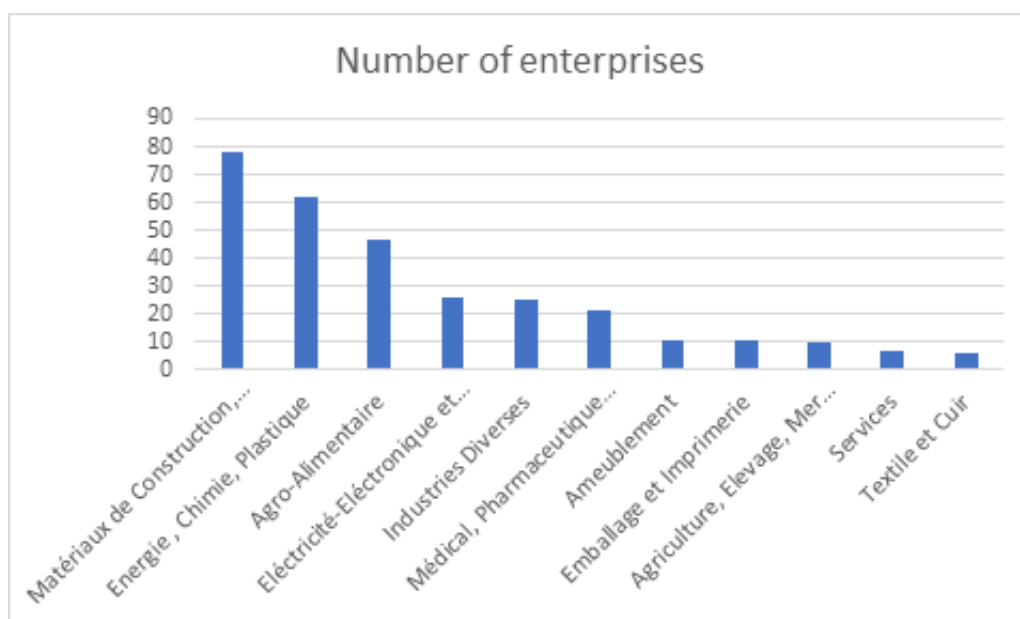
Researchers were not able to find sector-specific information about the number of employed persons, although we can continue to look for this. For now, we are not able to include this triangulation in the analysis.

We do however, have information about the overall relationship of employment demand relative to offers and placements (*presumably from ANEM data, though we need confirmation of how comprehensive this is—whether all types of jobseekers or only certain categories*). This shows an average of 61,000 jobseekers each year, compared to an average of 20,000 job offers, and 16,000 job placements.

Additional Resources

The research team was also able to gather certain supplementary data about Sétif's economic sectors and employment conditions.

- A spreadsheet with an alternate method of calculating rankings based on extrapolation from open ended questions—although the conclusions appear to differ from my conclusions here, including these additional data in the analysis did not change the overall rankings.
- AFEQ project (EU/Government of Algeria) internal report/presentation describing:
 - Labor market analysis methods and identification of priority sectors: note that this was apparently much more extensive study than ours with many additional sources of information gathered and analyzed
 - Project design and training pathway description
 - Neither this presentation nor the project website actually identify the target sectors that they determined based on the initial research. See: <https://tinilink.com/TYE7c>
- Projects financed by sector (from ANSEJ):
 - Shows the highest number financed in agriculture in both 2018 and 2019 (199 projects total), followed by
 - Automobile (97)
 - Construction (85)
 - "Industry" (unspecified) (85)
- Projects financed by sector (from CNAC)
 - Agriculture is also clearly the most financed sector here (313 projects)
- Annuaire Economique et Sociale de Sétif (2017), which contains additional statistics about the governorate as well as descriptions of different industry sectors (in French).
- An ANEM spreadsheet containing information about 31,087 jobseekers—including sex, age, level of education and qualifications, work experience, military service status, occupational objective, general occupation, years of experience, diploma and specialty. This information could be further analyzed to help determine the kinds of beneficiaries we most want to recruit into the project for the Sétif site.
- Chambre de commerce: list of enterprise names by industry sector, containing 304 company names. This data shows the highest number of enterprises are in construction materials (a category that also includes public works and hydraulics, according to this data source) with 78 companies, followed by energy, chemicals, and plastics (62 companies), and agri-food processing (47)—distinct from primary agricultural and livestock activities. At a second level and virtually tied in terms of number of companies are electricity, electronics, and information technology (26), "diverse industries" (25), and medical and pharmaceutical companies (21).



Summary of Rankings

Below are the strict means/averages gathered from interviewees.

Industry Sub-sector	Competitiveness		Employment Impact Potential			Enabling Context	Leadership	Overall Rank
	Interviewee Rank: Export growth potential	RCA from OEC ²³	Interviewee Rank: SME participation	Interviewee Rank: Youth opportunities	Labor Force Participation	Interviewee Rank: Fewest Bureaucratic/Regulatory Barriers (ONLY 1-2 responses)	Interviewee Rank: Committed leadership	
Agri-business	3.25	6.140	1.00	4.00		1.00	5.00	
Food processing	3.25	6.140	2.00	2.66		3.50	2.50	
Plastics	2.50	0.011	2.25	1.67		5.00	2.50	
Consumer electronics	2.30	0.026	4.00	1.33		5.00	1.00	
Construction materials	2.25	0.160	3.75	1.33		5.00	1.67	
Pneumatics	5.00	0.001	7 (one response)	5 (one response)		5.00	2.00 (just one response)	
Medical materials	3.00 (two divided opinions)	0.006	4.5 (two divided opinions)	4 (one response)		5.00	2.00 (just one response)	

Below is a simplified rank order that also takes into account factors such as respondent disagreement and some qualitative remarks. Tie rankings are preserved as ties and no ranks are skipped.

Industry Sub-sector	Competitiveness		Employment Impact Potential			Enabling Context	Leadership	Overall Rating (Simple Average, lower is better)	Weighted Rating (major factors weighted equally)	Weighted RANK
	Interviewee Rank: Export growth potential	RCA from OEC Rank	Interviewee Rank: SME participation	Interviewee Rank: Youth opportunities	Labor Force Participation Rank (unavailable)	Interviewee Rank: Fewest Barriers	Interviewee Rank: Committed leadership			
Agri-business	4	1	1	5		1	3	2.5	7.1	1
Food processing	5	1	2	4		2	4	3.0	9.0	4
Plastics	3	5	3	3		3	4	3.5	10.5	5
Consumer electronics	2	4	5	1		3	1	2.7	7.5	3
Construction materials	1	3	4	1		3	2	2.3	7.1	1
Pneumatics	7	7	7	*		3	*	6.0	17.0	7
Medical materials	6	6	6	*		3	*	5.3	15.0	6

* excluded as there was only a single interview response.

According to the simple average of rankings, in which each ranked element is counted the same, the top priority sectors would be:

1. Construction materials
2. Agri-business
3. Consumer electronics

This list leaves out plastics, which was among the top sector recommendations given by respondents both at the beginning and end of the questionnaire. It also places agribusiness higher than food processing, though there is some uncertainty about how clearly respondents consistently distinguished

²³ The revealed comparative advantage from the Observatory of Economic Complexity: https://oec.world/en/visualize/tree_map/hs92/export/dza/all/show/2017/ While Algeria's economy is strongly dominated by petroleum products, RCA data is available for the small market share of other types of exports and can be used for comparative rankings needed for the purposes of this study. A higher RCA shows higher export competitiveness.

between these two sectors.

I also calculated the results differently, by weighting each criteria category the same way (*whether they had one, two, or three sources of data*). This does not significantly change the results. The final ranking with this system is as follows:

1. Construction materials
2. Agri-business (tied with the above)
3. Consumer electronics
4. Food processing
5. Plastics

The above ranking indicates that the sectors of construction materials, agri-business combined with food processing, and consumer electronics should be selected. However, upon attempts to identify SMEs in the consumer electronics sector to follow up for the next phase of the research and business growth acceleration planning, the researcher noted that he was unable to identify any and respondents were unable to provide any further contacts for SMEs in the sector. Indeed, the sector was ranked 5th in SME participation and is dominated by large firms such as IRIS and Brandt.





Therefore, although the sector may offer some potential for youth employment in Setif, and consumer electronics firms should be considered for activities to support youth workforce development and/or business incubation, it does not appear to offer sufficient avenues for the cooperation with SMEs that this phase of the project means to achieve.

Recommendation



In Sétif, we should focus on the sectors of: construction materials, agri-business combined with food processing, and plastics.

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