

TAHTA BUSINESS OPPORTUNITY MAPPING 2021



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC



ENROOT



Table of Contents

Business Opportunity Mapping for Tahta Region in Sohag	7
Table of Contents	7
List of Figures	7
List of Tables	7
List of Acronyms	7
INTRODUCTION	7
STUDY OBJECTIVES	7
METHODOLOGY	7
Tahta District Overview	7
Geographical Profile	7
AGRIBUSINESS SECTOR	7
Tomatoes, Onion and Luffa	7
Tomatoes	7
Onions	7
Overview of the Production Process and Value Chain (Onion and Tomato)	7
Identified Challenges (Onion and Tomato)	7
Luffa	7
Overview of the Production Process and Value Chain	7
Identified Challenges	7
Agro-waste (Compost)	7
Overview	7
Identified Challenges	7
LIVESTOCK SECTOR	7
Meat production	7
Overview of the Production Process and Value Chain	7
Dairy	7
Overview of the Production Process and Value Chain	7
Identified Challenges of Livestock Sector	7
MANUFACTURING SECTOR	7
Wood and Furniture Industry	7
Input materials	7
Identified Challenges	7
PROPOSED OPPORTUNITIES & INTERVENTIONS	7
1) Business Opportunities	7
2) Proposed Development Interventions	7
CONCLUSION	7

List of Figures

Figure 1 Illustration of economic sectors and subsectors under study in Tahta, Sohag	7
Figure 2 Research process	7
Figure 3 Map of Tahta District	7
Figure 6 Industrial establishments in Tahta. Source: Industrial Development Authority.	7
Figure 5 Plots of land per industrial zone in West Tahta Industrial Zone.	7
Figure 6 Share of horticulture crops across the districts of Sohag	7
Figure 7 Tahta's share of Sohag's tomato production.	7
Figure 8 Tahta's share of Sohag's production.	7
Figure 13 Tomato and onion production process in Tahta	7
Figure 14 Luffa production process in Tahta	7
Figure 11 Estimated no. of cattle in Tahta	7
Figure 12 Estimated No. of cattle and animals in Sohag. Source: CAPMAS	7
Figure 13 Livestock production process	7
Figure 14 Dairy production process	7
Figure 15 Wood production process	7

List of Tables

Table 1 Tahta' demographic profiling	7
Table 2 Tahta's infrastructure	7
Table 3 Education facilities in Tahta	7
Table 4 Tahta's productivity for cultivated fruits and vegetables	7
Table 5 Onion and Tomato identified Challenges	7
Table 6 Luffa identified challenges	7
Table 7 Agrowaste challenges	7
Table 8 Livestock identified challenges	7
Table 9 Wood and furniture identified challenges	7
Table 10 Proposed investment opportunities	7
Table 11 Proposed opportunities	7

List of Acronyms

B2B	Business-to-business
BDS	Business development services
CAPMAS	Central Agency for Public Mobilization and Statistics
FGD	Focus group discussion
GAFI	General Authority for Investments and Free Zones
GDP	Gross domestic product
IDA	Industrial Development Authority
IMC	Industrial Modernization District
IZ	Investment zone
MFI	Microfinance institution
MSMEDA	Micro, Small and Medium Enterprises Development Agency
MTI	Ministry of Trade and Industry
RMG	Ready-made garments
SIA	Sohag Investors Association
SME	Small and medium-sized enterprises



INTRODUCTION

Tahta is one of the 12 regions located in Sohag's West bank, situated between Asyut and Akhmim. Tahta includes 5 rural units: Banga, El-Sawama West, El-Safeha, Nazlet El-qady, and Shattura. Tahta's industrial zone is located in the west of the town, on an area of 912 feddan, located 50 km away from Sohag city. Factories in Tahta are classified as follows: 74 are under construction, 81 are operating, 15 are about to operate, and 32 have not started yet.

As Enroot works towards boosting local economies, it constantly seeks to identify economic sectors which have the potential to offer opportunities for young women and men to generate income and contribute to the overall local economic development of the governorate. Accordingly, this report aims to scan Tahta's economic sectors to identify potential business opportunities for both small and large enterprises/business owners, which would work towards the overall development of the district.

The report presents a socio-economic profiling for the district of Tahta, and provides an overview of the agribusiness, livestock, and manufacturing sectors. This is done through conducting a value chain analysis on the subsectors of the aforementioned sectors and proposing investment opportunities accordingly. In addition, the report proposes development interventions, based on the analysis enabled by the fieldwork.

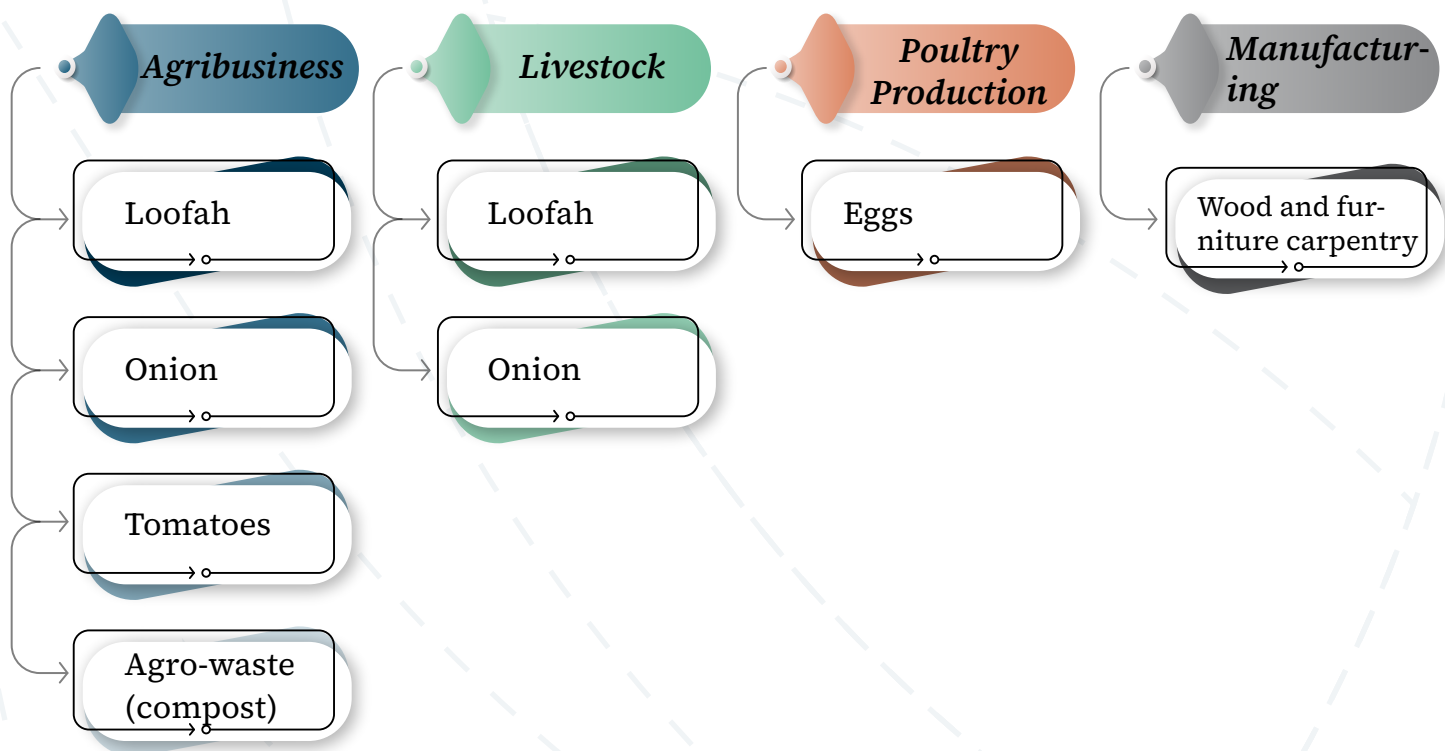
STUDY OBJECTIVES

Enroot is conducting a **business opportunity mapping study** to provide an overview of market structure in Sohag, specifically in the district of Tahta, with an emphasis on the three sectors of interest of **agribusiness, livestock, and manufacturing** and their sub-sectors, as illustrated in Figure 1. The aim of the study is **to identify potential areas for economic growth and development**, whilst also determining the required **method of approach to accomplish those goals**. As such, the study uses a **cluster diagnostic based on a market system development approach** to highlight **opportunities challenges**. The study will also focus on private sector partnerships, which will inform and direct the design of capacity building programs and the creation of start-ups that address local market gaps, needs and the real demand of the private sector.

The objectives of the study are as follows:

1. Providing an extensive overview and analysis of the sectors (**agribusiness, livestock, and manufacturing**) and their sub-sectors.
2. Defining demand-based investment opportunities for the targeted sub-sectors to identify areas of potential, as well as their challenges and proposed solution

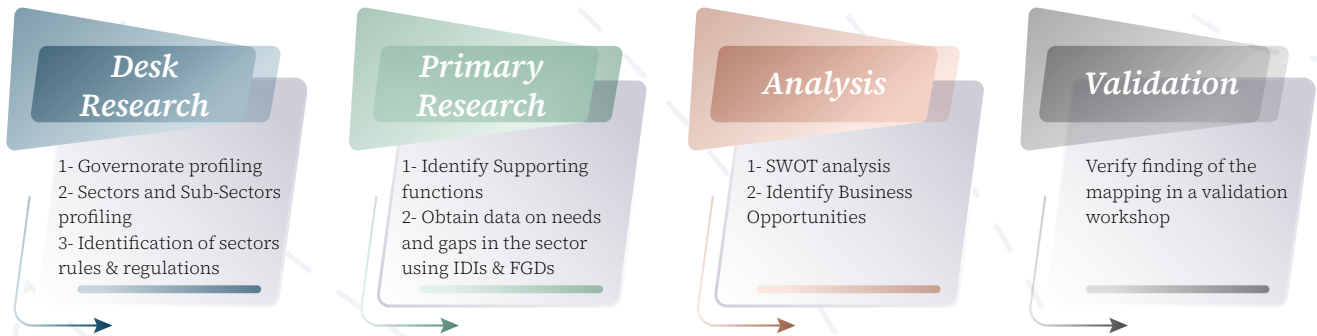
Figure 1 Illustration of economic sectors and subsectors under study in Tahta, Sohag



METHODOLOGY

The business opportunity mapping was prepared with a solid research methodology that combines both qualitative and quantitative analysis. The analysis infers reliable information and avoids bias by triangulating different data sources during data collection (Figure 2). In addition, the methodology takes into account Enroot's ethical considerations in research. This was fulfilled by ensuring that participants/respondents were pre-informed of their participation in the study and oriented with the study objectives and scope. Their written or verbal consent was obtained in case of audio or video recordings.

Figure 2 Research process



The mapping was done using research-inclusive techniques for data collection, utilizing both secondary and primary resources. The primary resources were obtained through qualitative data collection using in-depth interviews (IDIs) and focus group discussions (FGDs). Secondary resources, particularly CAPMAS Annual Statistical Bulletins and governorate and sector reports, aided in quantitative data collection and governorate profiling. Moreover, both the private sector, government entities and nonprofit entities, such as development partners, were included in the sample. This is in addition to adopting gender sensitive approaches that ensured adequate female representation in the recruited sample as well as research tools that are designed to be gender-friendly.

Based on the project’s objectives, a sample criterion of **11 IDIs and 6 FGDs** were identified targeting producers, traders and processors in relevant areas covering **each subsector**.

Tahta District Overview

Geographical Profile

The district of Tahta lies 33 km to the north of the district of Sohag and is bordered from the north by Tama district and from the south by Al Maragha district. Tahta consists of five rural units: Banga, El Sawama West, El Safaha, Nazlet El Qady and Shattura villages¹. At the west of the town of Tahta, 50 km away from the district of Sohag, resides the West of Tahta Industrial Zone, which covers an area of 912 feddans.² According to the latest publicly available data, 40 projects have granted approval to be established in West of Tahta Industrial Zone, estimated to provide 2260 job opportunities³.

Figure 3 Map of Tahta District



1 Sohag Governorate Website.

2 “The Industrial Development in Sohag”. Industrial Development Authority, 2012

3 Ibid.

The major source of economy in Tahta is trade and agriculture. It is also well known in Egypt for its furniture industry. Tahta's population is categorized as completely rural, with an estimated population of 470,834⁴. Around 45 percent of rural households in Tahta have piped water, which is high in comparison to the other districts. Tahta has a diversified and rich economic sector encompassing food, manufacturing, agriculture, and handicrafts. The agricultural and manufacturing sectors are interrelated, since many agricultural crops are used as raw materials for certain industries. Tahta is also famous for its agriculture zone specifically that of loofah, as well as for its furniture manufacturing cluster. Of particular importance is the **agribusiness sector**, since Tahta largely contributes to the cultivation of horticulture crops in Sohag and contains a diverse share of livestock production.

The **manufacturing sector** in Tahta is undergoing significant development. Tahta has 250 formally registered workshops, whereas the total number of workshops involved in all furniture activities is 5,000. In addition, as Tahta is known to be the "Damietta of Upper Egypt", it is considered a prominent carpentry cluster with potential to expand beyond the local market of the region and contribute to the overall furniture industry of Sohag. Tahta is also known for its handicrafts; the district specializes in handmade textile garments.

West Tahta is host to one of Sohag's four industrial zones, which spans over 912 feddans. It was one of the industrial zones for which the Industrial Development Authority (IDA) signed infrastructure agreements with contractor companies in December 2020⁵. As water, sewage, electricity, and telecommunications infrastructure networks will be developed in the industrial zone, it is expected to become one of the most prominent in Upper Egypt. However, the current status of the infrastructure facilities and services in West Tahta industrial zone is extremely poor. The only existent services are a police unit, unclean portable water and mobile telecommunication infrastructure with a weak network and no landlines. Moreover, infrastructure facilities, such as electricity, gas supply, sewage system, roads, a fire station, and a health unit, are either non-existent or insufficient.

Demographic Profile

Tahta District has a populated area of 157.15 km², with a population of 470,834 in 2019⁶. Table 1 outlines Tahta's main demographic indicators.

Table 1 Tahta' demographic profiling

Demographic indicator	Figures
Low productivity ⁷	470,834
Low productivity ⁸	15.31 percent of Tahta's total population
Low-quality crop ⁹	22 percent of Tahta's total population

Tahta's labor force participation is about 44.77 percent, of which 19.2 percent constitute the participation of women in the labor force¹⁰. The employment percentage in Tahta is estimated to be at 71.36 percent. Furthermore, female unemployment in Tahta has reached 27.97 percent. In addition, university graduates represent 15.98 percent of the population, whereas 12.39 percent of the females are recent graduates¹¹.

4 "Tahta". Sohag Governorate Website

5 "IDA Ink Deals for Natural Gas Delivery to Industrial Zones in Qena, Sohag". Egypt Oil and Gas, December 2020.

6 Ibid.

7 "Tahta". Sohag Governorate Website

8 Figures based on official data gathered by field officers

9 Ibid

10 "Tahta/Sohag Governorate". Egyptian Natural Gas Holding Company, 2016

11 Ibid.

Infrastructure and Services Profile

Table 2 below presents the status and capacity for Tahta's roads, water, sewage and electric stations.

Table 2 Tahta's infrastructure

Items	Status and Capacity
Water ¹²	<i>Production rate: 67,288 m³/day</i>
Sewage ¹³	<i>Sewage stations: 10</i>
Sanitation Plant ¹⁴	Tahta Sanitation Sanitation plant works with a production capacity of 35,000 m ³ per day, and total costs of EGP 150 million. The plant serves 320 thousand people
Electricity	<i>Production rate: 376,187,850 KWh/year</i> ¹⁵ 99.64 percent of the total residents subscribe to electricity. ¹⁶
Roads	<p>The main roads connecting Tahta to other cities are : ¹⁷</p> <ul style="list-style-type: none"> Aswan western Agricultural road also known as Tahta-Tama road Qena - Manflut Road Aswan Eastern road Giza Luxor road
	<i>Paved internal roads</i> ¹⁸ : 145 Km
	<i>Paved regional roads</i> : 401.5 Km
Communication and Post Offices ¹⁹	<i>8 call districts and 29 post offices</i>
Natural Gas ²⁰	<i>19,779 subscribers to the natural gas network</i>

There are a total of 351 general and azhary schools in Tahta. Table 3 below illustrates the education facilities in Tahta divided according to the stage and level of education as well as number of facilities.

¹² "Tahta". Sohag Governorate Website

¹³ Ibid.

¹⁴ Tralac

¹⁵ Ibid.

¹⁶ "Tahta/Sohag Governorate". Egyptian Natural Gas Holding Company, 2016

¹⁷ Ibid.

¹⁸ "Tahta". Sohag Governorate Website

¹⁹ Ibid.

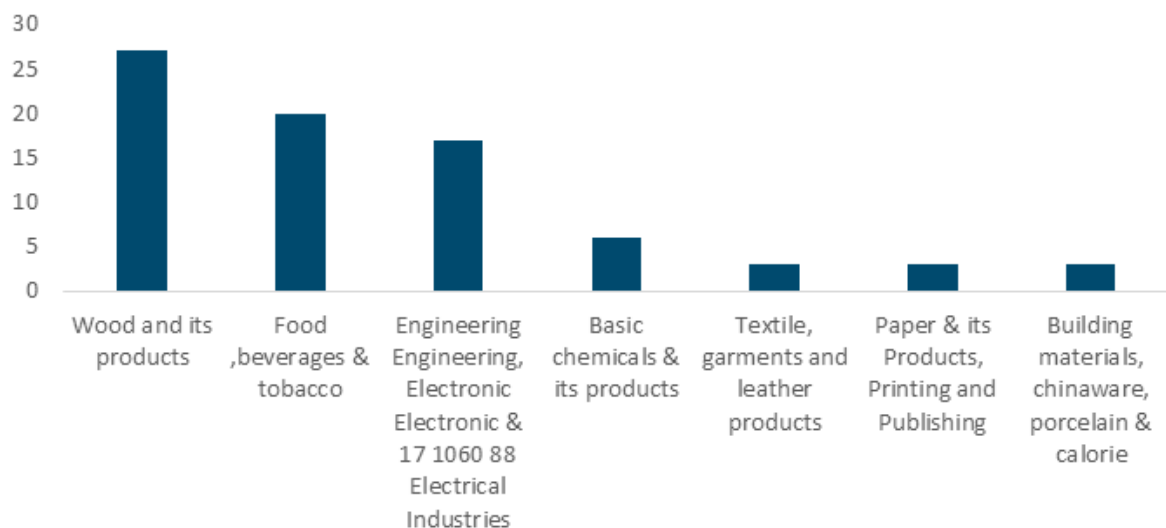
²⁰ Ibid.

Table 3 Education facilities in Tahta

General and Azhari Education	
Educational Stage	No. of Schools
Nursery	88
Primary	122
Preparatory	75
Secondary	25
Technical education	11
Single class	6
Girls' schools	15
Special education	7
Readings	2

There are a total of 89 industrial establishments registered in the Industrial Development Authority (IDA) in Tahta, which comprise around 25 percent of Sohag's industrial establishments. The highest number of establishments is found in the wood subsector, followed by the food, beverages and tobacco subsectors. Figure 6 shows the total number of factories in Tahta's district according to each industrial activity, investment cost and labor capacity :²¹

Figure 4 Industrial establishments in Tahta. Source: Industrial Development Authority.



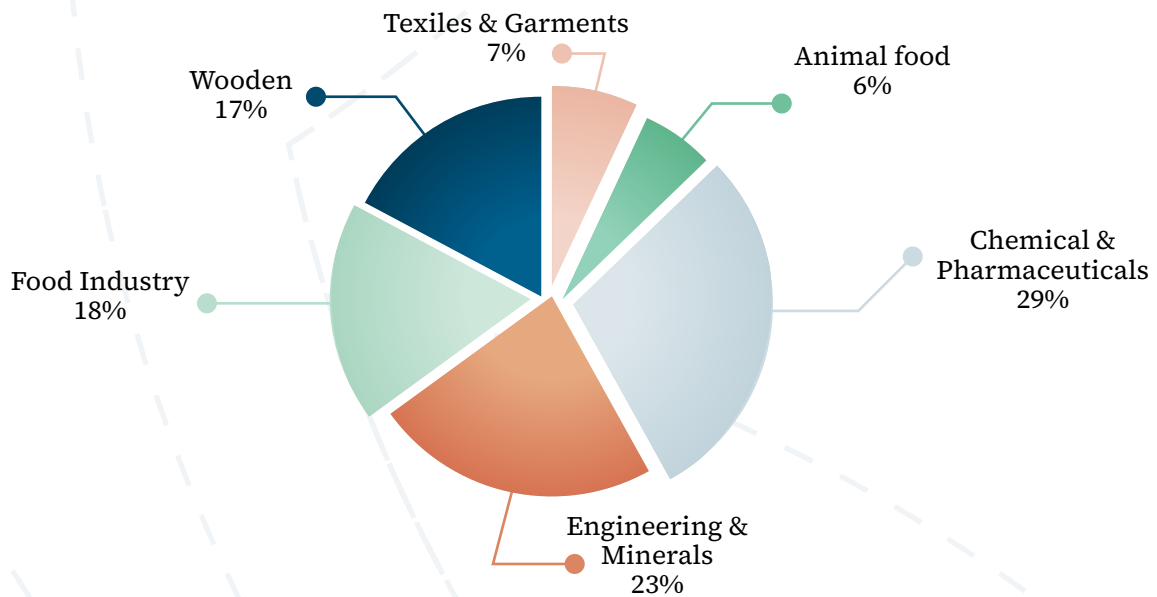
²¹ "The Industrial Development in Sohag". Industrial Development Authority, 2012

In addition to the industrial establishments registered in the IDA, there are a total of 219 approved projects in West Tahta Industrial zone as of 2020²²The operational statuses of the approved businesses are classified as follows :²³

- | **81 factories are established and have started business operations**
- | **15 factories are ready to operate**
- | **74 factories are under construction with a demonstrated purpose**
- | **32 are already assigned lands**

Furthermore, the classification of allotted plots of land per industrial sector in the West Tahta Industrial Zone is presented in Figure 5 below.

Figure 5 Plots of land per industrial zone in West Tahta Industrial Zone.

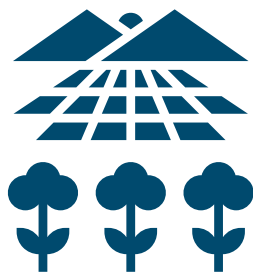


Based on Sohag's governorate website, the current total created jobs in the established factories in West Tahta Industrial Zone are 3245 job opportunities, %10 of which are occupied by women, particularly in the food processing sector and the textile and apparel sector, both of which comprise only %25.1 of the overall industrial activities in West Tahta Industrial zone. Further, the currently approved projects should employ 5700 employees upon operation, whereas the 30 plots that were allocated after 2017 are estimated to create 300 job opportunities²⁴

²² Unpublished report by the World Bank

²³ Ibid

²⁴ These estimates are based on the predictions of the IZ manager, who in turn base his estimates on the plans presented by the investors. In other terms, there is no official document that indicates these numbers, and they could vary after business activity inauguration based on the size of market, the new technologies discovered, the financial deficiencies that investors may face, and so on.

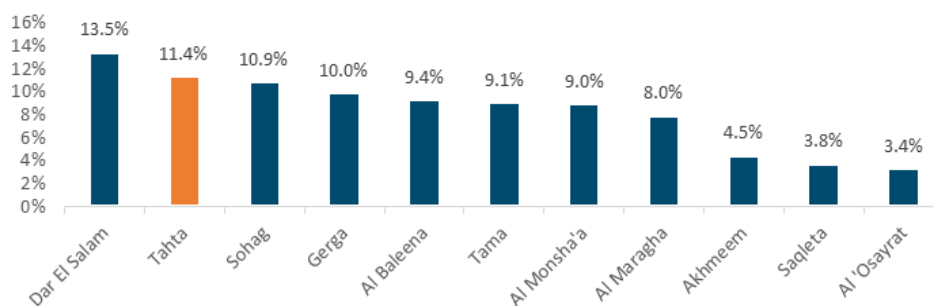


AGRIBUSINESS SECTOR

Agriculture is the most prominent economic sector in Sohag, securing close to 80 percent of the total labor force. Tahta's total cultivated²⁵ area is around 39,067 feddans, while its cropped²⁶ area is around 74,154 feddans²⁷ Additionally, Tahta is host to 31 agricultural associations and is most famous for its production of wheat and maize²⁸

Figure 6 presents the division of Sohag's horticulture across its different districts. Tahta ranks second in the share of horticulture crops following Dar El Salam.

Figure 6 Share of horticulture crops across the districts of Sohag



²⁵ The total cultivable area consists net area sown and current fallows

²⁶ The gross cropped area represents the total area sown once and/or more than once in a particular year

²⁷ Ibid

²⁸ Ibid

The main horticultural crops in Tahta are loofah, tomatoes, onions, and potatoes. In addition, horticulture crops are considered to be one of the main agricultural activities in Sohag. More than 80 percent of Sohag's population is involved in the production of horticulture crops. **Table 4 also presents Tahta's productivity for cultivated fruits and vegetables.**²⁹

Farmers have been facing immense losses due to the halt of exports caused by the COVID19- crisis. This has impacted actors within the agricultural sector, including pesticide traders, who were heavily impacted by the farmers' losses given the farmers' diminished financial capabilities and purchasing power.

Crop	Area (feddans)	Average feddan productivity	Total production
Cultivated Vegetables			
Onion	756	15 tons	11340 tons
Garlic	74	14 tons	1036 tons
Tomato	153	19 tons	2907 tons
Green Beans	12	1.19 tons	5.9 tons
Peas	3	0.2 tons	0.6 tons

Crop	Area (feddans)	Average feddan productivity	Total production
Cultivated Fruits			
Peach	0.45	280K/acre	3,080 tons
Mandarin	19.75	8320K/acre	164,320 tons
Orange	1.6	9120K	127,680 tons
Lemon	15	68000 fruits	1,059,300 fruits
Guava	7	9600K	69,600 tons
Mango	13	42400 fruits	580,300 fruits
Pomegranate	5.7	7200K	41,400 tons
Figs	11	7200K	81 tons
Olives	190	4200K	823,100 tons
Grapes	1.9	15000K	178,125 tons

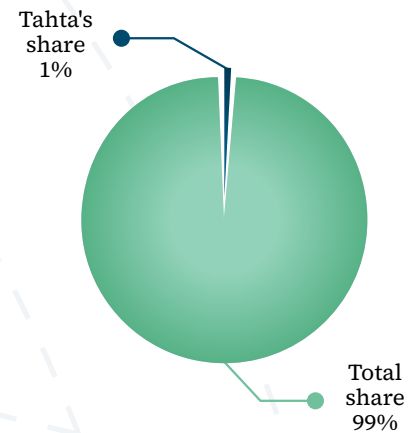
²⁹ Manually collected by Enroot's field researchers

Tomatoes, Onion and Luffa

Tomatoes

Tomatoes produced in Tahta comprise 1.3 percent of Sohag's total production, as shown in Figure 7. They are planted over 153 feddans, with a production rate of 19 tons per feddan, amounting to a total production volume of 2,907 tons. In general, the crop yield and the proximity of Egypt's delta to major factories and markets grants the Delta a comparative advantage. However, the seasonality conditions offered by Upper Egypt grants a governorate like Sohag a major merit as well. This is because Sohag produces tomatoes during times when there is no tomato production, particularly during the winter. As a result, large tomato quantities from Sohag are contracted by tomato concentrate factories. The top competing governorates with Sohag in tomato production are Qena, Minya, Assiut, Beni-Suef and Wadi Kharit (Aswan).

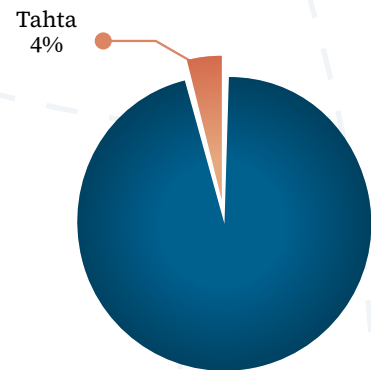
Figure 7 Tahta's share of Sohag's tomato production.



Onions

Onions produced in Tahta account for 4.5 percent of Sohag's total production, as shown in Figure 8. They are planted over 705 feddans, with a production rate of 15 tons per feddan, amounting to a total production volume of 11,340 tons.

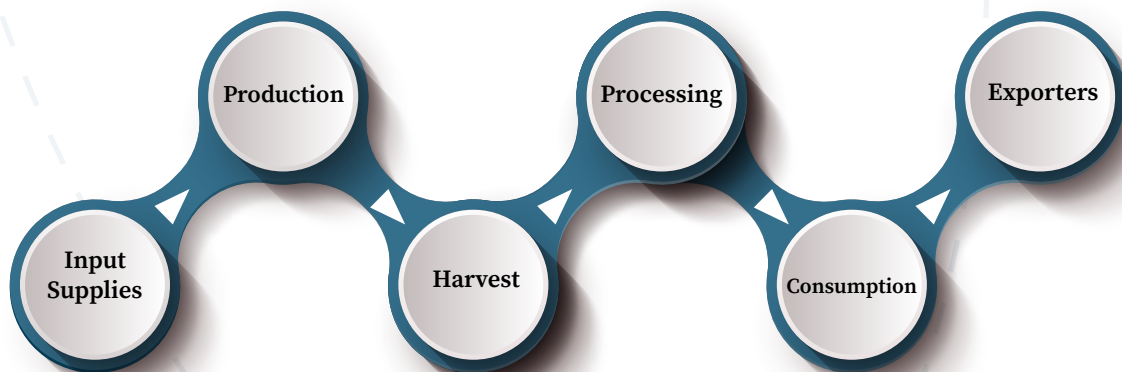
Figure 8 Tahta's share of Sohag's production.



In Tahta, the more abundant type of onion grown is the "golden feteela", which is cultivated from Feb to May of each year. Unlike the red onions, "feteela" are not usually stored. The onions planted in Tahta are perceived to be sturdier and of better quality than those planted elsewhere. This perception is based on Tahta's climate, which is characterized by humidity, which offers ideal conditions for planting onions, and increases its storage lifespan.

Overview of the Production Process and Value Chain (Onion and Tomato)

Figure 7 Tomato and onion production process in Tahta



The input supplies for the cultivation of tomatoes and onions are seeds, fertilizers, pesticides, and "peat moss". These supplies are considered costly, particularly the "peat moss" since it is imported from India. The cost to plant one feddan of tomatoes is around EGP 40,000, while a feddan of onions would cost around EGP 30,000. The difference in price between both crops is due to the higher volume of pesticides needed by tomatoes, where tomatoes need pesticides all year long and at all farming stages. The selling price for both crops is around EGP 2,000 per ton. There are no contract or advance payment schemes.

Tomatoes are sold directly from the ground to the trader, and trade is usually limited to Tahta. Unlike onions, the selling of tomatoes is a time-sensitive manner given that they are easily ruined and thus cannot be stored. Based on a survey conducted during the month of August 2020, tomatoes cost farmers two to three Egyptian pounds per kilo, and they add their markup to finally be sold for EGP 6.74 per kilo in the end markets.

Onions, on the other hand, are sold all over Egypt’s governorates given that they are a more “durable” crop and can be stored for long periods of time. Even though farmers have the luxury of storing onions, they usually sell them as soon as they are painted given their continual need for financial liquidity to be able to continue their farming activity. In addition, storage facilities require capital and resources which the farmers do not possess. Before the COVID19- crisis, onions from Sohag were exported, either through suppliers or contract farming. The available variety, however, is only suitable for export to Russia and Eastern Europe.

Identified Challenges (Onion and Tomato)

Table 5 Onion and Tomato identified Challenges

Dimension		Key Challenges
Input Supplies	Limited resources	There is a general dearth of resources to support the farmers; for example, the agricultural associations provide the farmers with very little supply of pesticides. This pushes all farmers to purchase almost all the needed pesticides from the “black market” .
	Variety	<p style="text-align: center;">Onion</p> <p>There are no varieties of onions in Egypt that can be exported to Europe due to the lack of the specs required by European export regulatory entities</p>
Input Supplies	Pests and diseases	<p style="text-align: center;">Tomatoes</p> <p>Diseases ailing the harvested tomatoes have become a major issue facing the farmers in Tahta, to the point where almost 25percent of the produced crops are treated as waste</p>
	Climate and environmental factors	<p style="text-align: center;">Tomatoes</p> <p>During the summer season, damage to the tomatoes can occur during transport due to extreme heat and distance</p> <p>High soil and water salinity affects productivity and quality of produce</p>
	Covid-19	Farmers faced grave losses in their production in the wake of covid19- due to the halt of exports. None of them came close to even covering the land expenses they incurred
End Market	Pricing and market access	Lack of mechanism or criteria for setting crop prices, leading to indebtedness of farmers, which contributes to their cycle of impoverishment
	Transportation	High transportation costs compromise profitability of some crops given the large transportation distance
	Export potential	<p style="text-align: center;">Onions</p> <p>High cost of experimental trials to assess feasibility of using new seeds with higher export potential.</p>

Luffa

The Luffa cluster in Sohag is of a small size compared to those in Lower Egypt and is concentrated in two localities north of Tahta: Bani Harb and Nagaa Abou Khors. While national figures estimate the number of luffa feddans in Sohag to be merely six feddans, in reality there are approximately 120 feddans in Sohag, of which 80-40 feddans are in Tahta alone. The productivity of a single luffa feddan in Tahta ranges between 4,000-2,000 Koz.

Overview of the Production Process and Value Chain

Figure 8 Luffa production process in Tahta



Luffa cultivation is considered a non-complex process, and profitable for farmers even in seasons with lower-than-average productivity. The required input supplies are seeds, palm fronds, reed, plastic frames, soil tilters, fertilizers, and pesticides. The cost of servicing one feddan of land to sow luffa crops is on average EGP 20,000. For most farmers, even if the feddan productivity is less than the average, it would still remain profitable.

Farmers face a number of challenges during luffa cultivation, including the prevalence of agricultural pests, the limited guidance to best agricultural practices, and the limited capacity to produce high quality trellis for the crop to grow on.

Production mainly takes place in the summer. While cultivated lands can produce up to 12,000 pieces, they often only end up producing 4,000 pieces³⁰. Some of the factors contributing to underproduction are shortage of skilled labor, lack of marketing channels and poor postharvest facilities.

The ideal productivity figure for the luffa is 12-10 thousand gourds per feddan, and the average produce is 7-6 thousand pines per feddan. In Tahta, however, the average produce is around 6-4 thousand pines per feddan. The pines produced are usually not of fixed quality, and the quality is mostly determined by the climate, as well as the servicing of the land (fertilization, irrigation, pesticides, etc..). Around of %60-50 of the produced luffa is considered to be of high quality.

Luffa processing is limited as it depends on manual labor with low tech machinery and with limited design options based on market-demand. Only one type of luffa is produced in Sohag and is primarily used for bathing purposes. It is either sold by street peddlers locally or less commonly by traders in Cairo. The selling price of the luffa is based on the market price set in Alexandria and Sharqiyah, given that they have the biggest land areas and the highest produce of luffa. Net profits can range from EGP 25,000-5000 per feddan per season.

30 Ibid.

Identified Challenges

Table 6 Luffa identified challenges

Dimension	Key Challenges	
Harvesting	Agricultural pests	<ul style="list-style-type: none"> Some of the pests include what is known by the “spiders”, which cause a kind of fungus called “Peronospora schleideni”. The most dangerous pest is the “fruit fly”, which once attacks the luffa pine, deems it entirely worthless and is automatically thrown away.
	Guidance and access to information	Absence of guidance and support from relevant government institutions, in addition to non-provision of subsidized fertilizers to luffa farmers According to the farmers, the luffa is “not considered to be a crop”.
	Low-quality trellis	In order to reduce costs, farmers build the trellis using wicker or using phragmitis communis (plant used in making reed), both of which invite the creation of fungus.
	Limited farmer capacity	Limited financial capabilities for Tahta’s farmers
	Land fragmentation	Increased land fragmentation; in the past, one farmer used to be responsible for the planting of two luffa feddans. Now, with the economic deterioration of the farmer and the farming trade, many land owners divided and sold their lands.
Post-harvesting	Limited processing	Low volume of processing for Luffa produced in Tahta; farmers find it more profitable to sell their luffa in raw form to the street vendor
	Quality and production	Low produce of high-quality pines in comparison to Lower Egypt; Both Sohag and Lower Egypt governorates produce high quality or grade A luffa pines. Nonetheless, using the same input supplies, the produce of grade A pine in Lower Egypt is significantly higher than Tahta’s produce. Further, most of the luffa produced in Lower Egypt is processed unlike in Taha, where it is mostly sold in its raw state.
End market	Remoteness and lack of connectivity	<p>The luffa factories are not connected with farmers from Sohag, and most of them do not know that there are crops in Tahta.</p> <p>Moving from Upper Egypt (Sohag) to the luffa factories in Cairo or Alexandria is very expensive, and due to this the suppliers were transferred from Upper Egypt and the Delta to save transportation costs.</p>
	Supporting functions	<p>No specified export council for luffa in Egypt</p> <p>No specified HS code to facilitate export</p>

Agro-waste (Compost)

Overview

In the district of Tahta in Sohag, the use of compost is slowly but gradually being introduced to farmers as an alternative to the use of chemical fertilizer. Compost fertilizers are organic fertilizers made from plant wastes. Its value lies in its ability to preserve the quality and fertility of the land, all whilst providing nutrients to the plants. In Egypt, where organic farming is rarely 100 percent applied, compost can be considered a decent alternative for chemical fertilizer, which could often lead to land degradation. Furthermore, the quality of the products farmed with organic fertilizers are considered to be vastly better than those grown with chemicals.

Currently, there is one small team of six individuals operating in Tahta to produce compost through a small startup called “Composco”. While compost is still relatively new to the market in Sohag, there has been demonstrable demand by farmers in Sohag and in other governorates in Upper Egypt. For instance, Tahta’s compost team, which had started its first production cycle in 2019, witnessed a tripled demand for its product in 2020, to the point where it was not able to supply some of the orders, particularly for the ones outside of Sohag.

Compost is proving to be a considerably competitive sector in Sohag, particularly given that almost no one works in the field of agricultural waste. Furthermore, seeing the rapid success which Composco was able to achieve during a short period, and in spite of resource limitations, it can be concluded that there is a considerable market gap in Upper Egypt when it comes to agricultural waste.

Overview of the Production Process and Value Chain (The case of Composco)

A number of resources are needed to produce compost, including the land, the waste itself, the additives, and the machinery used for the production processing – in particular, the chopping machine- which is used to chop the waste collected. Another piece of machinery is needed to stir the waste piles. Agricultural waste, which is the main raw resource, is considered to be the costliest input, taking up around one third of the total costs (including transportation), and is also the most challenging resource to procure. In order to produce 100 tons of compost, 200-120 tons of waste would be needed.

The chopping process is also considered to be a costly item, regardless of whether a machine was bought or rented. Given that Composco is still relatively new in the market, it does not yet possess the capital needed to purchase the machine, and the team ends up opting for rentals. This is also not financially viable and eats up a considerable portion of their expenses.

Due to the limited resources facing Composco, the team can only manage to run one cycle per year to produce compost, which starts in September, and takes around 4-3 months. The cost of producing a ton of compost is around EGP 1,000. The selling price of the produced compost is determined based on the production costs incurred, and the average profit margin placed is around 30percent.

Composco started out by targeting the greenhouses. At this point they are working to target the neighboring pomegranate gardens, and all of their supplied compost is pre-ordered in advance. As mentioned earlier, the demand they are facing is higher than their supply capacity but expanding to meet additional demand is certainly a part of their long-term expansion plan.

Identified Challenges

Table 7 Agrowaste challenges

Dimension		Key Challenges
Input Supplies	Limited resources	<p>The most prominent challenges lie in the ability to secure the capital to acquire the needed input resources such as:</p> <ul style="list-style-type: none"> Machinery; particularly the chopping and stirring machines which are quite costly. Agricultural waste; there is a challenge in managing to collect large amounts of waste from one place, especially now that farmers use all sorts of waste instead of disposing of them.
	Costs	High transportation costs: particularly the costs incurred when collecting waste from different places



LIVESTOCK SECTOR

The livestock sector is a major contributor to Egypt's economic development. Livestock production in Egypt is unique in that it is confined exclusively to irrigated cropping areas³¹. Livestock production complements agricultural production in Egypt, particularly since the latter is not highly mechanized³². Sohag's livestock sector is considered an important source of livelihood for many families in the governorate. Its production share of cattle and animals constitute 8.4 percent of Egypt's overall production³³. Poultry production in Tahta is not a significant industry representing %7 of total production of Sohag (92 farms), mainly livelihood of families, therefore, this section livestock is focused on Meat production due to its significant size.

³¹ Soliman, Ibrahim and Fitch, James. "The Livestock Economy in Egypt: An Appraisal of the Current Situation".

³² Ibid.

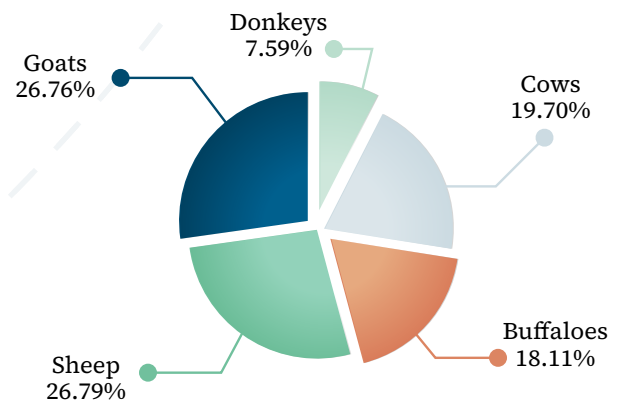
³³ Ibid, p.11.

Meat production

Figure 11 Estimated no. of cattle in Tahta



Figure 12 Estimated No. of cattle and animals in Sohag. Source: CAPMAS



Tahta's livestock production is considered to be the highest in Sohag, followed by that of Al-Sawalem. Its high quality is a result of using organic and good quality feed which produces good quality meat, unlike the feed used in commercial farms. The volume of livestock production in Tahta is estimated to be around 150 thousand cattle. The percentage of each type of animal to the total numbers in Sohag and Tahta are presented in Figures 11 and 12. While goats and sheep have the most counts in Sohag, cows come in the first place in Tahta.

Overview of the Production Process and Value Chain

Figure 13 Livestock production process



The input supplies are essentially the calves and the feed- both of which the farmers either grow or directly purchase from the markets, or both, depending on their needs. The feed is usually the costliest input for the livestock farmer/trader.

Livestock producers are essentially small farmers (with an average of 4-3 calves per year) who own/rent a piece of agricultural land, on which they plant hay and clover in order to feed the cattle. The main business activities consist of growing and fattening the calves in order to sell in the market. The fattening of a calf takes up to 3-1 years which is considered very high given that it can be reduced to 1 year can with improved breeding practices and applying best practices in feeding.

Livestock producers face a number of challenges during and after the production process. The equipment used for production is outdated and farmers have to resort to hand labor coupled with poor biosecurity where animals are at a constant risk of infection.

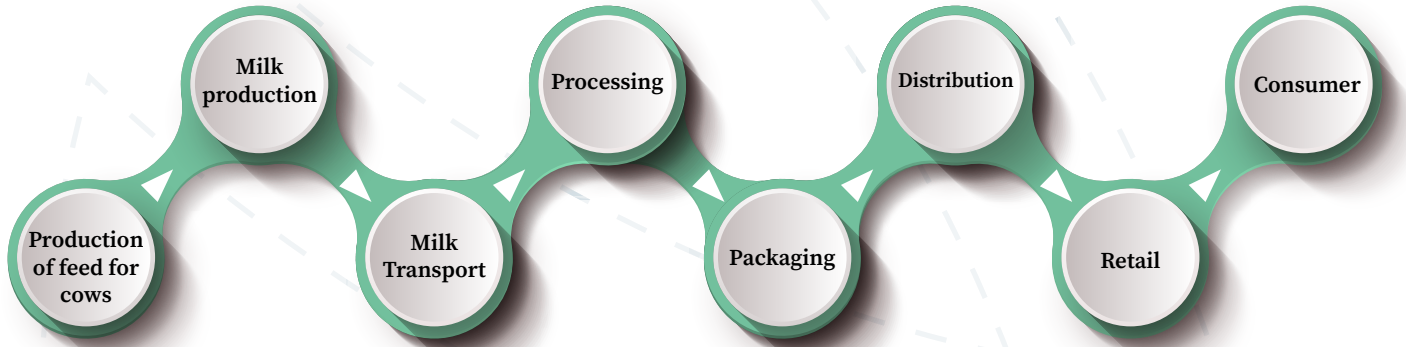
Farmers have no access to market information channels except traders who typically control market prices (increase prices when there is a shortage in supply and decrease prices when supply is abundant). In addition, farmers have no contracts or advance payments schemes which withholds the chain from developing as it places many uncertainties and risks on the farmer left with little profit to develop its livestock production from a business perspective (coupled of course with other challenges).

Due to ownership of small number of calves, and lack of access to market, most farmers depend on traders who make their orders in advance. To a lesser extent they resort to local markets in Cairo, Tahta and in some cases Luxor. Farmers' lack of knowledge of market information and weak understanding of how to improve their breed and production, they usually sell at an average selling price set by the market (ranging between EGP 20-15 thousand per calf).

Dairy

Overview of the Production Process and Value Chain

Figure 14 Dairy production process



Tahta's milk producers follow traditional manual processes of milk processing, mainly into cottage cheese, butter, and skimmed milk. In addition to several challenges of low access to knowledge and poverty, productivity is typically low, with skimmed milk being sold below-market prices (1 EGP per 1 kg of milk). Such low-selling prices inhibit farmers from making any profits and from developing their businesses. The highest produce is the baladi butter, which makes it the most product in need of marketing.

While dairy production suffers from several weak points across each phase of the value chain (elaborated in the challenges table 7), Tahta includes buffalos, which produces high quality buffalo milk that can produce a range of high quality dairy products including yoghurt, cottage cheese and creamy non-skimmed milk.

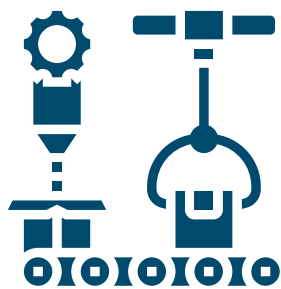
Identified Challenges of Livestock Sector

Table 8 Livestock identified challenges

Dimension		Key Challenges
Input Supplies	Price fluctuation	Livestock: In addition to the high cost of input supplies, farmers/traders are often faced with hefty fluctuations in the price of the feed in spite of being widely available.
	Limited resources	Livestock: Inadequate access to improved breeds, in addition to high operating costs of high-yield dairy breeds leads the farmer to deal with low-yield breeds, which negatively affects quantity and quality of produced milk. Dairy products: Due to wide-spread poverty, insufficient fodder is provided for the livestock, which decreases the general production of livestock in comparison to the Delta.

Dimension	Key Challenges	
<p>Processing</p>	<p>Quality control</p>	<p>Dairy products: Due to geographical remoteness, it is difficult for some companies to conduct periodic audits for milk suppliers in order to make contractual agreements.</p>
	<p>Weak practices</p>	<p>Dairy products: Primitive methods are still used such as manual milking which reduces the quality of the milk.</p> <p>Dairy products: The dependence of local Tahta farmers on traditional methods contributes to the lack of sufficient and efficient cold chain infrastructure. In addition, the milk is collected through an intermediary who has a collection district, and all the milk from more than one farmer / source is mixed together. It reduces the quality of milk as it is from different farms.</p>
	<p>Technical assistance</p>	<p>Livestock: Livestock traders usually find it a challenge to receive technical/medical advice/assistance in the event of a cattle getting sick. There is also a shortage of vets, and the ones who do agree to come, often charge a substantial charge which the traders are unable to afford. In some cases, the free of charge assistance given by government vet clinics are incorrect and could worsen the health state of the cattle.</p>
	<p>Limited access to information</p>	<p>Livestock: Cattle are fed and fattened based on traditional methods, and farmers themselves complain of being not up to date with the latest methods and technological advancements in the trade. Other farmers do not possess the knowledge concerning which calves are suitable for fattening or not, and mostly purchase random calves.</p>
	<p>Climate</p>	<p>Due to the high temperature, Upper Egypt production of dairy is much lower than Lower Egypt</p>
<p>End market</p>	<p>Market demand and access</p>	<p>Dairy products: There is very little local demand for dairy products in Tahta. Farmers tried to sell out of Tahta, but demand was still considerably low given that Tahta produces buffalo milk which is mostly used in cream or cottage cheese production, unlike cow milk which is used for everyday local consumption³⁴</p>
	<p>Geographical remoteness</p>	<p>Dairy products: Tahta is located far away from most of the dairy factories in Cairo and the Delta, thus losing an important comparative advantage.</p>
	<p>Transportation cost</p>	<p>Dairy products: The cost of transporting milk from Tahta is very high because it is transported in refrigerated vehicles with refrigerated stainless tanks, which increases the price of the milk.</p>

34 Cows cannot tolerate the heat in Upper Egypt, unlike buffaloes which have a higher tolerance for heat



MANUFACTURING SECTOR

Wood and Furniture Industry

The furniture sector is the third largest industrial sector in Egypt in terms of the number of establishments and employment³⁵. The growth of the sector depends on the development of complementing sectors such as real estate, tourism and education. The sector includes thousands of factories and workshops, which account for 13 percent of total industrial employment; more than one million workers are officially employed in the sector.

When it comes to wood and furniture, Tahta is considered an important organic furniture cluster serving the local market. Down from 2,000 furniture workshops, Tahta currently hosts around 250 registered workshops, while the rest fall under the informal sector³⁶. The trade is classified into two main branches; “door and window”, and “furniture and carpentry”. The furniture products manufactured in Tahta are perceived to be competitive due to their durability.

35 “Egypt’s Furniture Industry”. Egyptian Furniture Export Council, 2016.

36 “Business Opportunity Mapping for Sohag”. Enroot Consultancy. Unpublished.

However, no furniture products are exported from Tahta. The furniture trade in Tahta is no longer considered a profitable trade, and 90 percent of furniture have closed their workshops over the past few years. This is because it faces various challenges, the most prominent of which is the lack of infrastructure, such as a port, transportation facilities, and logistics that could incentivize the expansion of the industry³⁷. In addition, the cluster needs to be divided into specialties in order to produce parts rather than full furniture pieces, which would serve in import substitution for local markets. In addition, linkages need to be created between workshops and technical schools³⁸.

Overview of the Production Process and Value chain

Figure 15 Wood production process



Input materials

All **input materials** used by traders and carpenters in Tahta are procured by traders from Damietta or Alexandria. However, all the raw wood is imported. There are two main types of imported wood; the more expensive type of wood is the Romanian wood, which costs around EGP 12,000/meter. This is followed by the Italian wood, and finally the Yugoslavian wood, which costs around half of what the Romanian wood costs (EGP 6,000/meter). The Yugoslavian has now become the most common type of wood used due to its affordability.

There are essentially two types/activities for the workshops in Tahta:

Some workshops are owned by carpenters who either purchase raw wood from the traders to manufacture the requested furniture pieces, or who purchase furniture pieces that have already been processed, which they assemble in their own workshops to sell directly to consumers. The pieces sold to consumers are usually bespoke pieces.

Other workshops are owned by wood traders who either import raw wood from Alexandria (Swedish/white wood) and Damietta, or who import processed unassembled furniture pieces from Damietta, which they then sell to the carpenters.

Carpenters face a number of challenges during production. There is limited access to finance and 95 percent of workshops are not licensed. The products themselves lack innovation and production is underdeveloped.

There are no defined criteria upon which carpenters set their final selling price. However, what is clear is that carpenters are keen to sell to ensure any cash inflow, which also often means that they set a minimum profit margin. For example, a bedroom which costs EGP 15,000 and which is usually sold for EGP 20,000, is at this point sold for EGP 16 or 17 thousand. All products are sold locally; there is no exportation due to limited marketing channels.

37 Abdelaziz, Fatma et al., "Clusters as Drivers of Local Industrial Development in Egypt". IFPRI Middle East and North Africa, 2018.

38 Ibid.

Identified Challenges

Table 9 Wood and furniture identified challenges

Dimension		Key Challenges
Input Supplies	Cost	Increase in prices of raw material (imported wood primarily) due to foreign currency fluctuations, and due to monopolization of imports by wood traders in Damietta which created space for price manipulation.
	Access to information and capacity building	There is very little access to trainings or capacity building workshops; carpenters rarely receive any training to improve the quality of the work or to develop their designs.
Production	Cost	Additional everyday costs imposed on the carpenter such as cleaning, electricity, insurance, and registry fees; all of which have placed additional financial burdens on the carpenter, which he became unable to cover.
	Legal impediments	Significant increase in value of taxes imposed on all carpenters in Tahta due to arbitrary assessments conducted by the tax authorities.
	Market demand	Decrease in market demand due to limited financial capabilities of Tahta's residents.
End Market	Market demand	Decrease in market demand due to limited financial capabilities of Tahta's residents.

PROPOSED OPPORTUNITIES & INTERVENTIONS

The main purpose of this report is to identify business opportunities for young entrepreneurs and potential investors to explore their potential and promote viable businesses to stimulate youth-led economies. Based on the study's methodology focusing on existing sectors, minimum business opportunities are identified (as elaborated in the coming section) and thus does not fairly represent the full potential of the city. Thus, Tahta can benefit from further research to assess viability of investment in other non-existing sectors such as solar energy sector, ICT sector including call centers, mining, fertilizers, ceramics, cement, iron, and various heavy industries.

This business mapping has shown challenges and strengths in the existing economic activities in Tahta, with limited potential for growth constrained by several rooted challenges which are mainly:

- | Lack of access to knowledge
- | Lack of skilled labor
- | Lack of financial and non-financial services
- | Lack of sufficient technological infrastructure
- | Migration of young minds and skills to major cities, draining its human capital
- | lack of availability of proper education

Building on those identified challenges and exploring the different sectors potential, this section present

- (1) Business opportunities and
- (2) suggesting for development interventions among the explored and specified sectors in this study.

1) Business Opportunities

The suggested business ideas seek to capitalize on the strength and opportunities and address the weakness and threats faced by the different subsectors in Qena. The proposed investment opportunities are hereby illustrated in the table 9 below.

Table 10 Proposed investment opportunities

Business Concept	Project Objective	Project Size	Project Description
Agribusiness			
Livestock (milk production)			
Milk collection hub for buffalo	<ul style="list-style-type: none"> Job Creation Value-addition Access to better and newer markets 	Medium	The objective of the project is to supply high-end quality milk products, including yoghurt milk, cheese, etc.
Buffalo milk processing facilities			
Agro-waste			
Agri-waste processing Hub	<ul style="list-style-type: none"> Job creation Access to better and newer markets 	Medium	The purpose of the project is to capitalize on Tahta's viable waste generated from agriculture and supply existing market demand of compost. These hubs can also act as collection hubs encouraging farmers to supply their waste in return for incentives such as seeds, fertilizers, etc..
Wood manufacturing			
Machinery rental and design services enterprise	<ul style="list-style-type: none"> Facilitate access to expensive machines needed for design and value addition including CNC 	Medium	The purpose of the project is to capitalize on Tahta's viable waste generated from agriculture and supply existing market demand of compost. These hubs can also act as collection hubs encouraging farmers to supply their waste in return for incentives such as seeds, fertilizers, etc..

2) Proposed Development Interventions

While the objective of the report was to identify potential business ideas in Tahta, the report and the analysis have shown specific areas of development that are needed which serve as potential intervention areas for the development community. Analyzing the market structure with the objective of developing the local economy and stimulating youth-led economies cannot detach from the role of donor and development organization. It is thus important to highlight based on analyzed market systems the potential development interventions to help alleviate the overall environment and elicit growth in potential subsectors. On that basis, table 10 below represents foreseen development interventions areas in certain subsector based on the associated potential opportunities

Table 11 Proposed opportunities

Proposed interventions
Agriculture
Tomatoes, Onion and Luffa
<ul style="list-style-type: none"> Promote good agriculture practices to improve to improve quality and increase production Establish nurseries for tomatoes, onion, and luffa to enhance productivity and quality. Demonstration fields are a proven tool that encourages farmers to take initiatives and build nurseries based on witnessed results from demonstration fields
Livestock
<ul style="list-style-type: none"> Establish milk collection hubs to improve quality of supply high-end quality milk Provide breed improvement programs for animal breeds to improve production
Agri-waste
<ul style="list-style-type: none"> Facilitate access to agri-waste processors in Tahta to chopping and stirring machinery increase productivity and production capitalizing on existing demand in the market. Encourage establishment of new businesses to work on agri-waste processing to utilize resources of agriculture waste and supply the market gap
Manufacturing
Furniture
<ul style="list-style-type: none"> Overall value chain enhancement including capacity building for quality improvement, design development, and for linking producers with the market demand. Trainings can include trainings on painting skills to improve quality and training on new designs and glass manufacture Facilitate access to financial services to fiber factories to expand and capitalize on growing market demand

CONCLUSION

Upper Egypt in general has been largely put under the spot by governmental and development organizations over the past decade to elevate its economic conditions and capitalize on its natural and human resources. Sohag specifically received significant attention and several improvements are being witnessed on the performance level of infrastructure and services especially with the establishment of new industrial zones to attract investment. However, business environment is still stagnant despite entrepreneurship enhancement efforts to boost business initiatives by the community. As a result, stakeholders are interested in further analyzing the governorate and its cities to explore more ways of leveraging the region's conditions. While this business opportunity mapping study serves as a good basis for understanding the region of Tahta, it should be noted that the major driver for economic development remains within promoting large and medium investments to realize tangible results in a relatively shorter time. This does not only entail macro-level interventions including policies and national programs but also comprehensive programs working on targeting viable potential investors from and outside the region introducing them to investment options and linking them effectively to value chains.

On that basis, identifying business opportunities represents incremental steps towards improving the livelihoods of the community which should be taken into consideration when implementing development interventions including matching specific investors to specific opportunities. Apart from that, there are main areas of development that requires specific attention from development partners across Upper Egypt regardless of Tahta or Sohag at large. These areas of development are essentially associated with good agricultural practices given the beneficiaries' economic dependence on that sector including livestock. Other areas of development have to do with enhancing the general market exposure of different active sectors, facilitating business linkages to integrate local markets in wider networks and markets through field visits, facilitating access to financial and non-financial services, and finally promoting the establishment of sectoral associations to overcome limitations imposed by nature of small-sized businesses.



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

**Swiss Agency for Development
and Cooperation SDC**



ENROOT

