

CONFIDENTIAL

DRAFT INTERIM REPORT Redacted Version 3 for translation

**REPORT ON THE MILLING AND BAKING SECTOR
IN RESPECT OF THE MANUFACTURE OF
LEBANESE BREAD**



PJA

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Beirut

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Foreword

In the Middle East, and indeed in other regions, bread is considered a basic commodity and a right, and to support this governments frequently fix the price of bread to the ordinary consumer. This might be done through a variety of mechanisms; control through public sector bakeries; intervention pricing, fixed pricing in the private sector, support subsidies, all the private sector mechanisms supported through legislation and enforcement through the executive. All of these mechanisms can be open to abuse, especially in rentier economies. Additionally historical (and recent) evidence indicates that extracting the Government from the guaranteed provision of bread at a given price can, and does, cause immense social and political difficulties.

The scope of the work was extended, as described below, to encompass a review of the establishment of as much of the milling and baking industry as possible for the purpose of increasing the understanding of the current staff of the GDSC of the sector. In addition this report which covers aspects of legislation, common practice and understanding, as well as noting political interventions also has taken the opportunity to lay to rest some urban myths, and where possible, to establish the actual form and detail of legislation that sets out the several state interventions.

To complete the research and compile the report has required the participation of numerous individuals in the Ministries, in particular the focal point, the office of Crown Agents and the EU delegation, but particular thanks must be made to the recipients of our visits and responses to our accompanying questionnaires. Although the author had a specific letter of authorisation from the Minister the private sector companies visited co-operated, and between them provided some very detailed information on finances and practice. The team, comprising myself and the focal point were always well received, if sometimes with bemusement, but there was an overall willingness to co-operate on the area of concern. So a grateful thanks to all.

Additionally it should be noted that there has been a change of Minister during the research period with the confirmation of a new Government and Cabinet. It is also recognised that obtaining information from other ministries can be difficult and time consuming with a freedom of information request being more effective than a normal fraternal request.

A last remark; there are two versions of this report, this, the public report, respecting commercial confidentiality responses have been anonymised and specific responses omitted; a full unredacted report, with the full appendices is retained by the General Directorate Cereals and Sugarbeet of the Ministry of Economy and trade.

The project was funded by the EU under the Technical Assistance Framework, and managed by Crown Agents.

1.0 Introduction

This is a draft report comprising an overall review of the milling and baking industries in Lebanon with an interim financial appraisal for the manufacture of Lebanese Bread.

This report was produced as a result of a request by the General Directorate of Cereals and Sugarbeets of the Ministry of Economy and Trade. The initial brief was:

‘to create a model structure for detailed costing of flat Lebanese bread from an analysis that combines the different cost components of milling activity and its relevant value and influence on the bakery segment to generate the cost of bread loaf production and the cost of a unit weight of bread.’

‘The final output will include a cost formula with parameters able to be amended with every change in market prices and cost of production.’

Additionally in the deliverables element of the TORs item (2) requires the consultant to:

‘Produce fact-based Government Policy for Subsidy and pricing Structure for flour and flat bread ...’

It is the contention of the author that the consultant may make recommendations based on the findings of the report to the GD, who in turn will make policy recommendations to determine future policy for the Ministry; not to make Policy. The recommendations and preparation of the report are subject to the approval of the GDCS.

At the request of the GDCS the scope of the research element of the report was expanded to include all the mills and as many bakeries, of different scale as possible with ancillary organisations and experts within the sector.

The report, and its attendant appendices and addenda cover the research, respondent’s answers, factors influencing the sector, Government interventions and their base, development of the financial model, with the assumptions for factor inclusion and the criterion for policy determination.

The report at the time of writing still requires elucidation of the milling activities of two mills, one recently established, the other in the process of being built, and the outcome of discussions of a suggested tariff on flour imports.

2.0 Background to the Industry

2.1 Introduction

This report is focussed on the production of the ‘Arabic Bread’ or the ‘Lebanese bread’, although there are many varieties of flatbread produced and sold commercially within Lebanon, the bread subject to this report is defined by Lebanese Standard for Lebanese Bread NL 240, July 2012. In principle the bread is made from low protein wheat flour (no commercial blends), yeast, sugar, salt and water.

The respective volumes of the ingredients vary according to the baker, cost, and season. These will be discussed below. There are government interventions, and involvement, at

each step of the process, some of which are seen as less than symbiotic. These will be discussed under each of the following paragraphs. Wheat is sourced both domestically, which is a minor contributor, but has to be considered because of the interventions, the majority of wheat is imported, mainly from the Black Sea region. The wheat is milled by the millers to a flour, one of many that are milled. Distribution of the flour is to bakers, who exist as a spectrum from the small producer making only Lebanese bread to the large industrial bakeries producing thousands of lines and Lebanese bread is but one, albeit volumetrically significant. The bread may be distributed by the baker, or sold onto retailers. It should be noted that all the companies involved are private enterprises – the Government maintains oversight and enforces regulation, although, as discussed, not without some contention. There are a variety of issues, some discovered by the research process, some recounted by the respondents; these are all in turn recounted below. Some areas may be redacted in the fuller access report.

2.2 Legislated Government Interventions

The Government, in the guise of various Ministries intervenes quite considerably in the lifespan of Lebanese bread and its manufacturing chain. Details as known are given in Chapters 10 and 12.

2.2.1 Recipe for Lebanese Bread.

The Standard for Lebanese Bread of July 2012¹ sets out the recipe for Lebanese Bread as comprising:

- Flour
- Sugar
- salt
- Yeast
- Water

The proportions are not set, and vary according to the baker. It may also contain, at the choice of the baker other (named) ingredients such as soya flour, milk, milk powder, condensed milk, and manufactured according to good manufacturing practice (gmp).

2.2.2 Price of Bread

This is established by a series of decisions of the Minister of Economy and Trade following a recommendation of the GDCS and is currently set at LL 1,500 (USD 1.00) per 1 Kg of bread. Historical decisions are set out in section 11.4.

2.2.3 Price of Wheat

There are two interventions on the price of wheat; these are:

- Domestic wheat production
- Wheat imports

The duty to maintain a safe domestic supply of bread, and to support domestic production is set out in a Legislative Decree of 1959² (and its subsequent amendments) and delegates these duties to the General Directorate of Cereals and Sugarbeet.

¹ General Directorate of Cereals and Sugarbeet. Standard for Lebanese bread NL 240. July 2012. Appendix H

The support of domestic wheat does not influence the price or the manufacture of bread – the flour contribution of domestic wheat is not significant and does not influence the wheat flour price. The intervention level of imported wheat does as does the mechanism.

Wheat purchases by the Government last took place in June 2014 at the then intervention price of USD 290 per tonne; Government purchased the wheat at the current market price, and the resells at the intervention price, thus *de facto* at a loss to the Government.

The import of wheat, its' sourcing and pricing implications are discussed in Chapter 12.

2.2.4 The Price of Flour

The price of the T85 flour for the baking of Lebanese bread is not legislated, but is set at a uniform output price set by the Miller's Union. The price at the start of the year (2019) was LL 530,000 per tonne, with small price fluctuations as per the millers' marketing strategy. The price was changed with effect from 1st February 2019 at LL 550,000/tonne. This price obviously has an impact on the margins of the miller, the baker, distributor and retailers.

These are discussed and are implicit to the creation of a pricing model.

2.2.5 Other Ministries

The Ministries listed below have a duty of care and a responsibility in certain areas within the manufacturing chain. However, in both the milling and baking sector the interventions by these Ministries can, and sometimes are, egregious, and costly in both monetary and performance terms. And some of these maybe a legacy of previous administrations. The Ministries concerned are:

- Ministry of Industry
- Ministry of Agriculture
- Ministry of Public Health
- Ministry of Economy & Trade
- Ministry of Labour
- Ministry of Finance
- Municipalities

The details of the interventions – many of which are agreed with – are detailed where they impact this value chain later in the report.

Overall the companies seek a greater centralised and co-ordinated approach to the government oversight of the industry.

² Legislative Decree n.143/59 12 June 1959 and 12 December 1959, Amended by law 20/67 and Law 138/92. These laws/decrees are currently up for revision and re-allocation of duties, and are currently in discussion between the Ministry of Finance and the Council of Ministers as at March 2019.

2.3 The Milling sector

To this author's knowledge there have been two formal published assessments of the industry in addition to the assessments conducted by the General Directorate of Cereals and Sugarbeets (GDCS). These will be covered in some detail in Section 7, but they are the Lebanon Milling Assessment³ conducted as part of the WFP Digital Logistics Capacity Assessment, published in 2013 and an investment survey conducted on the domestic wheat market by Blominvest Bank⁴ that includes the mills as the principal market for the wheat. It also covers in a little detail the support mechanism for the domestic farmers growing wheat.

There are currently 12 operating mills in Lebanon of varying capacity – with an installed capacity of some 3,800 tonnes per day (tpd), operating capacity totalling some 3,300 tpd, with an actual operating volume of some 2,800 tonnes, as given by the millers, but not including Al Ghozal. However, significantly the range of operating capacity and performance ranges from 40 tpd – to 490 tpd. This is important with regard to the long-term viability of different mills.

In terms of the Lebanese bread this issue becomes gains a higher profile where the mills with smaller capacity have a greater reliance on the T85 flour.

Overall, at the 2018 selling price of LL 550,000 per tonne for the T85 the market was worth some USD 111.8 million. The greatest expense for the miller is the cost of wheat; the average price for Black Sea cif wheat at Beirut was USD 223, allow USD 12 for costs to factory giving a total of USD 235 and a 78-80% conversion rate offers a nominal USD 64 to allow for milling and margin.

2.4 The Bakers and the Retail sector

Again, to this author's knowledge there is only one previously published report on the baking industry in Lebanon authored by the research department of Blominvest Bank⁵. This report describes the sector as having five large, 'industrial bakers' with a variety of product lines – from the traditional Lebanese Bread in various form , through traditional kaak, manakouche , to European bread variants – soft rolls, baguettes, etc. In addition to the traditional sweets of pastries with pistachios sweetened with honeys and syrups – crossing the line between patisseries and confectionary. The leading players discussed, with their market shares – in the context of Lebanese Bread were estimated at:

- Chamsine – 21-23%
- Wooden bakery -12-13%
- Moulin D'Or – 11-12%
- Al Sultan & Pain D'Or – 10-11%
- The 'around the corner' bakeries with 45-46%

The modern bakeries, apart from their focus on traditional sweets can be likened to any European patisseries with cakes, pastries, biscuits, traditional confectionary and a counter to make up daily meals/sandwiches. An assessment of market share for Lebanese Bread based on flour distribution is given in Chapter 8.

³ DLCA – 2.7 Lebanon Milling Assessment, WFP Dec. 2013 – <http://dlca.logcluster.org/display/public/DLCA>

⁴ The Lebanese Wheat Market; A Lay of the Land. Blominvest Bank, Beirut May 2016

⁵ Breaking the Bread Market: Lebanon's Modern day Bakeries. Blominvest Bank, Beirut Sept 2017

Numerically the small bakers outweigh the major industrial bakers, at a count of approximately 238 – with 20 others taking over 3,000 tonnes of T85 flour per year.

Using a range of retailing models, the larger 'modern bakeries', usually family or small private companies, either distribute, through their own (owned) outlets, franchises, or indeed using mobile shops.

Overall demand for Lebanese or Arab bread is estimated, by bakers, at between 25-27,000 tonnes per month. T85 flour distribution from the mills is sufficient for approximately 30,000 tonnes per month.

Putting this into a financial perspective the baking sector is worth up to some USD 27 million in gross returns per month.

2.5 Ancillary Services - Ports, Infrastructure

2.5.1 Ports

Given the importance of the ports in the transit chain of wheat to the millers it is important to understand the role that they play. Under the oversight of the General Directorate of Cereals and Sugarbeet this role includes:

- Initial inspection of cargo
- Discharging of cargo
- Co-ordination with Customs
- Record keeping
- Batch management
- Storage
- Quality Assurance (of cargos)
- Pest and contamination control
- Onward transit to the Mills

And as such they come in for their share of criticism, warranted or not.

2.5.2 Infrastructure

The main interaction of the Mills and the bakers and concern is with the electricity supply. Within the bounds of Lebanon there are the regional supply utilities and then Beirut supply. Although in some areas the supply although not constant is regular and timed, there are areas where the cut-off periods are irregular and random – and when 'on' can be for very short periods. This has become more prevalent and unpredictable as recently EDL restricts supply owing to fuel supply issues.

Water has not proved to be a significant problem with most companies either having a reliable municipal supply, or their own wells, all treated.

3.0 Methodology

The methodological approach taken by the researchers, given the expansion of the terms of reference to include all, or as many of the mills as possible, and an extended sample of bakers was as follows.

To prepare a questionnaire for the mills and the bakers each and visit selected plant. In each location visited the visit included an extended semi-structured interview with the owner/chief executive of the plant/facility or his or her appointed representative. It was clearly explained to the interviewees the nature of the visit – to capture a broad view of the industry, the particular segment of the industry, and to understand to a greater extent the constraints and issues facing the plant/facility in particular, including those that involve Government agencies. Beirut Silos as a significant part of the industry chain was also visited.

In support of the request for confidential information the Ministry of Economy and Trade provided a letter in support of the researcher from Crown Agents and outlining the support of the EU in this endeavour⁶. Two mills requested the signing of a non-disclosure agreement (NDA).

Additionally it was agreed that any publication of the report would be redacted to ensure that individual companies would not be identified where this involves commercially sensitive information.

Table 3.0 gives the list of the establishments visited and interviewed.

Mills	Bakers
Crown Flour, Beirut	Chamsine
Bakalian, Beirut	Moulin D'Or
Middle East, Zouk Mikael	Golden Dough
Dora, Beirut	Mechanical Habr Bakery
Baraka, Beirut	Others
National, Tripoli	Beirut Silos
Big Mills, Sibli	Ministry of Finance
Shahba, Borj El Barajneh	Utilities
Assaf, Bchamoun	Private sector baking machinery consultants/companies
Bekaa, Saadnayel-Zahle	
Modern Mills, Beirut	
Still to be seen	
Al Ghazal, Sidon	
Bekaa #2 (Bednayel)	

In addition to those listed in Table 3.0 it is proposed to visit the Chairman of the Baker's Union, in addition to seeking out more specific costings both in the milling and baking of the Lebanese Bread.

Also it would seem advisable to visit some more bakers given their numerical superiority, to further understand the working aspects of the small, and rural, bakers.

⁶ Copies of the letters addressed to the mills and the bakers are set out in Appendix B

4.0 Wheat available for the manufacture of Lebanese Bread

4.1 Introduction

There are two sources for the wheat available to the millers for the production of the T85 flour for the baking of Lebanese Bread. The first of these that should be considered is the domestic farming of wheat that produces two kinds of wheat – soft wheat and hard, durum wheat. The total domestic production of wheat currently was about 33,000 tonnes in 2018, although production on irrigated land in good seasons has topped 70,000 tonnes in 2005. However all of this wheat is not suitable for milling T85 flour and the second, or major source of wheat is imports, mainly from the Black Sea region recorded as some 576 thousand tonnes in 2018, with a peak of 640,000 tonnes in 2017.

4.2 Domestic Wheat Production

To maintain the farming tradition within Lebanon, mainly in the Bekaa Valley, but also in the North and small holdings in the South, the farming of wheat is supported through a pricing arrangement with the General Directorate of Cereals and Sugarbeet. The actual figures for recent wheat redemptions under the GDCS scheme are given in Table 4.2. It should be noted that there were no payments in 2015 & 2016 as there was no opportunity for a confirming decision in the Council of Ministers to release funds, however GDCS did pay compensation to the farmers concerned. Volumes and intervention prices for the period 1995-2010 are given in Appendix Ga2.

Table 4.2 also shows the area claimed planted in the farmers' applications and the area confirmed through aerial survey⁷. This survey mapped the areas under cultivation and includes, fruits (citrus, others), olives, vineyards as well as crops; the survey results are given in Appendix Ga2.

The process requires that the GDCS make an assessment of the cost of production of wheat (seed, fertiliser, work contribution etc.) and then add a margin to allow a sufficient profit to the farmer. This price is neither dependent on, nor related to the price of wheat on the international market. The agreed price is confirmed by a decision of the Council of Ministers on an annual basis.

An offtake of the domestic wheat production is the selection of wheat for roasting – producing 'green wheat' for local consumption. Farmers also do sell wheat directly to the mills, especially Durum wheat for the milling of semolina.

4.2.1 FAO figures

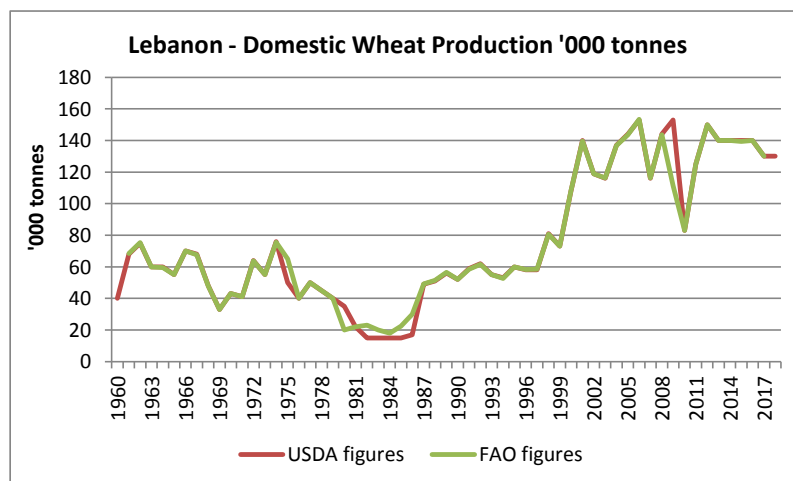
An additional source for data concerning domestic wheat production are those statistics prepared and published by the USDA and the FAO. These are graphically presented in Chart 4.2 following, with the figures given in Appendix Ga2. These are reported as being based on the official figures from the Ministry of Agriculture, Government of Lebanon.

These figures are acknowledged to be exaggerated and an attempt was made to rebase them in 2010 – although prior escalation was evident before then. The stated method taken was to interview a broad spectrum of farmers – local producers – as to their yield and

⁷ Survey conducted by CNRS, an agency that reports to the Prime Minister's Office.

quantity of land sown. This provided an initial figure of 29,840 hectares under wheat cultivation, down from 39,800 ha the previous year (and 20,000 down from 2008).

Chart 4.2 Combined USDA and FDA reported wheat production figures for Lebanon 1961-2017



It is noted that a graphic in 'Lebanon Opportunities', February 2019 cites FAO figures for a graphic entitled 'Breakdown of Major Agricultural products by value of production (2014)'.

The Ministry of Agriculture has been alerted to the disparity between wheat production figures as reported by them, and the figures on record with the GDCS.

4.3 Issues reported with domestic wheat production

It is held by some millers that the wheat submitted for purchase to the Ministry's warehouse contains sweepings and is heavily soiled with impurities, and some farmers will go around the mills to seek additional sweepings to add to the sacks they submit to the government for payment. This could be resolved by allowing direct sales to the mills – which would improve the quality and the price paid. The Ministry could then pay a price differential – or a fixed amount per donum farmed.

Table 4.2 – Domestic wheat production and redemption by the General Directorate of Cereals and Sugarbeet 2014-2018.

Year	Farmer Applications			Surveyed results ⁸		Yield	Qty	Price	Price	Total cost	Avg price	Total cost	Avg price	Selling price	Price to mkt		Effective subsidy		
								Wheat	Wheat	Wheat		Wheat		Total receipts				Given	
	No	Area Donums	Area ha.	Area Donums	Area ha.	T/ha	tonnes	LL/t	USD/t	LL Million	LL/t	USD	USD/t	LL million	LL/tonne	USD/t	Check LL million	LL million	USD
2014	537	118,258	11,826	n.a.	n.a.	2.79	32,940	590,000	393	20,040	608,379	13,360,000	406	13,001	394,690	263	13,249	13,249	8,832,981
	additional cash									6,211									
2015	524	131,884		n.a.	n.a.	-												22,979	15,319,383
	additional cash																		
2016	913	190,000	19,000	113,000	11,300	-												12,868	8,578,667
	additional cash																		
2017	1144	210,000	21,000	104,000	10,400	3.85	40,001	590,000	393	23,601	590,000	15,733,727	393	14,748	368,684	246	8,853	8,251	5,500,834
	additional cash																		
2018	775	153,000	10,300	136,000	13,600	2.37	32,229	590,000	393	19,015	590,000	12,676,740	393	10,950	339,756	227	8,065	8,000	5,333,333
	additional cash																		

⁸ Remote survey conducted by CNRS, an agency that reports to the Prime Minister's Office.

4.3 Wheat Imports

Appendix Ga 3.0 contains detailed tables for all the recent Lebanese wheat trades, both accounted through the UN Comtrade database and Lebanese Customs. It should be noted that over the last ten years the classification of wheat imported into Lebanon has been reclassified under the Harmonisation System (HS), and occasionally is at odds with that of the UN figures. Another source of discordance with the UN figures is the period of reporting, i.e., a UN trade – which is fob the port of lading may well fall within a different period at point of discharge. Also some countries have different reporting schemes. Nonetheless on inspection the figures do show correspondence.

Over an extended timeframe the pattern of wheat imports to Lebanon have changed with a significant re-alignment to the Black Sea from the Americas. This change allows the use of smaller loads (3-6,000 tonnes) in smaller vessels, with shorter passage times thus reducing costs per cargo. Additionally these vessels may discharge more easily within the confines of Beirut Ports.

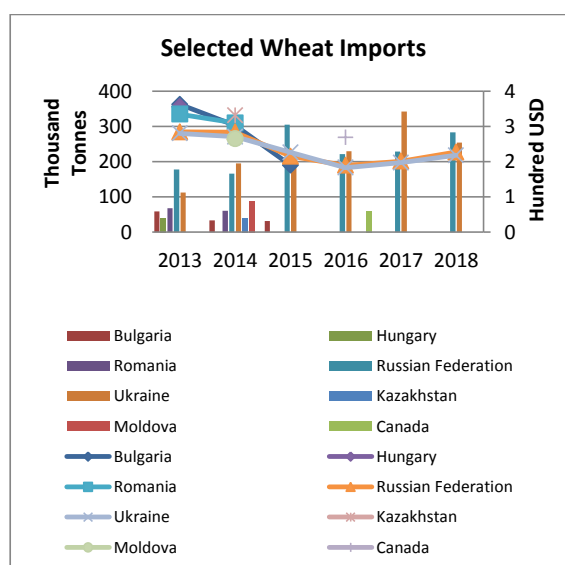
On an historical note it has been reported⁹ that Lebanon used to receive food aid in the form of concessional purchases of US wheat in the 1980s – however, the price of bread and flour was fixed, in LL, and when the LL was depreciated against the dollar, the state lost out substantially. Records of food donations and concessions are held by the FAO¹⁰. These, for example, show Lebanon receiving 54,000 tonnes of wheat in 1988. In addition in 2000 the US donated approximately 70,000 tonnes of wheat, the proceeds of which were intended to be hypothecated for the 'to help revitalize the economies of the South and the western Bekaa'¹¹.

⁹ Reported by a respondent and see 'Food Aid: A Primer' ESA Working Paper No 05-05, Agriculture and Development Economics Division, FAO June 2005 www.fao.org/es/esa

¹⁰ FAO databases: INTERFAIS – International Food Aid Information System, now replaced by IATI – International Food Aid Information System, and also see Food Aid Flow Reports 2008-2012.

¹¹ Department of Agriculture statement on transferring the wheat (and soya oil to Mercy Corps) cited Daily Star 7 November 2000

Chart 4.3. Selected imports in Lebanon from the Black Sea ports, and Canada for the period 2013-2018. The figures are those of Lebanese Customs.



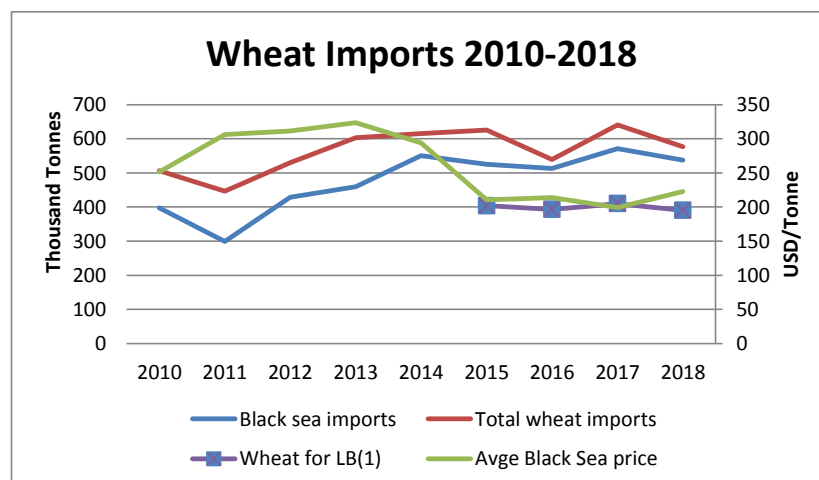
Black Sea imports are summarised in Table 3.2 below and charted in Chart 3.3 following. Complete figures, transcribed from Lebanese customs are available at Table Ga 3.4 in the Appendices – showing all imports 2010-2018.

Table 4.3 Black Sea wheat imports to Lebanon 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total wheat imports	506,112	446,118	529,763	603,279	615,357	625,612	538,896	640,891	576,268
%age Black Sea	78.55%	66.99%	80.84%	76.11%	89.46%	83.91%	95.10%	89.09%	93.22%
Avg Black Sea price	251	306	311	323	294	211	214	199	223
Black sea imports	397,532	298,834	428,271	459,147	550,516	524,923	512,473	570,968	537,222
Wheat for LB(1)						404,093	393,111	409,887	390,446
%age of LB wheat						77%	77%	72%	73%

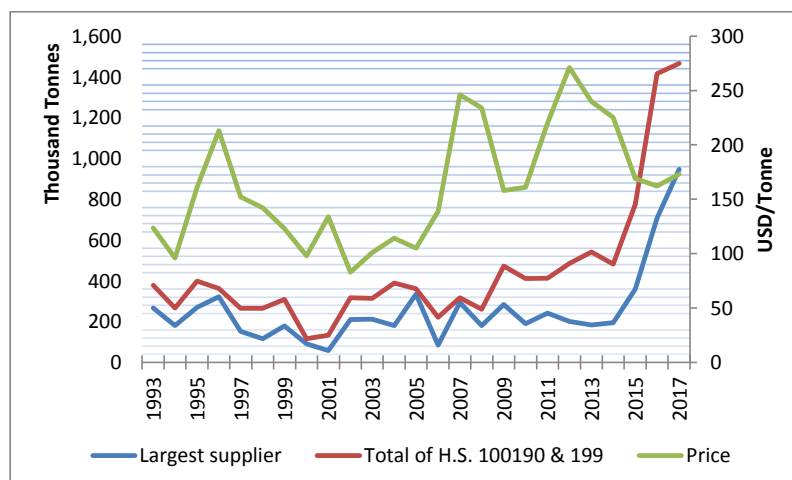
Note: This is the calculated gross weight of wheat from flour distribution at 78% extraction rate

Chart 4.4 Black Sea imports of wheat against total imports, with prices; 2010 -2018



The UN Comtrade figures are charted in Chart 4.5, and demonstrate a significant anomalous set of trading figures. Table 4.4 shows that these anomalies arise out of reported large jumps in Ukrainian and Russian wheat to Lebanon. It is possible that these could be deliveries to other ports in the Eastern Mediterranean, but such other destinations have not been verified. Verification would normally be conducted by examining all the import figures for all regional ports.

Chart 4.5 UN Comtrade figures for wheat trade to Lebanon 1993 – 2017.



4.4 Price Support Mechanism

The historical background to the wheat support pricing mechanism is set out in a Ministry of Finance Thematic Series report of October 2012¹². The paper covers two components of the wheat subsidy programme from mid-2007 to November 2008 when the programme was suspended. The first component was a direct subsidy of USD 50 dollars a tonne – to end October 2007, then this was raised to USD 75 per tonne to December 2007. The second component was the direct import of wheat until the end of 2008. The authors report that the amount of wheat imported under the first component is unknown. Approximately 250,000 tonnes was purchased under the second component. The programme was re-instated from November 2010 to June 2011 when approximately a total of 100,000 tonnes was paid for under the scheme. And again from June of that year to December when a further 53,000 tonnes were purchased. That scheme was brought to an end in December 2011.

The volume of wheat purchased, and the distribution of the wheat thus purchased was based on the distribution of T85 flour to the bakers – each mill receiving wheat in proportion to their contribution to the T85 market.

The recommendations of that report bear repeating:

‘Recommendations.

1- International wheat prices should be closely monitored by the Ministry of Finance (MOF)¹³ and the Ministry of Economy and Trade (MOET), for early price warnings as necessary, and to allow for better short-term cash management and improved medium-term fiscal projections.

2- Agricultural subsidies, particularly with respect to wheat and bread, should also be monitored. This is important in view of increased demands i) to reintroduce the beetroot subsidy, and ii) to subsidize feed-grain and milk production¹⁴.

3- Past governments have not been successful in ending subsidies or in rationalizing them, as these have usually been reintroduced as soon as price swings re-emerged. A coherent policy that is devised by Government (represented by the Ministry of Agriculture, MOF and MOET) and the private sector is needed since the trend is that demand for cereals will most likely outpace supply, with a resulting upward trend in prices.

4- The following issues need to be addressed by Government:

a) In the context of the policy to support poor households, who are the main beneficiaries of the bread subsidy, is there an alternative to this expensive subsidy that would better target the poor?

b) Has the wheat subsidy achieved its objective of enhancing domestic production of cereals, and crop rotation? Alternatively, has the subsidy rather acted as a disguised cash transfer to people assumed to be poor?

c) Is a wheat subsidy annual cost of LL 9 to 10 million per farmer considered to be high? Or should the subsidy be viewed as an element of a rural policy that makes it an acceptable cost to pay as incentive to farmers to stay on the land.’

¹² Wheat and Bread Subsidies 2007-2011. Ministry of Finance Thematic Reports. Beirut October 2012

¹³ This function is now performed by GDSC

¹⁴ Currently no subsidies are offered in respect of beetroot. Feed-grain and milk production are the responsibility of the Ministry of Agriculture.

Subsequent Council of Minister decisions and wheat price support programmes undertaken are being researched.

s

Table 4.4 USD intervention prices at which the Government purchased wheat.

Decision No	Date	USD/tonne
33	20 Oct 2010	260
2	2 Feb 2011	310
3	11 Feb 2011	297
	Dec 2012	290
	June 2014	290

The last price for intervention was fixed at USD 290 tonne for Black Sea wheat in June 2014. The current wheat price is monitored by the GDCS, who using Reuters check wheat import prices to Tunisia, Syria and Egypt. However it is suggested that with current dollar inflation taken into account the intervention should be of the order of USD317.00.

The last wheat purchasing programme by the Government on behalf of the mills was completed in June 2014.

Table 4.4 – extracted from Appendix Table Ga 3.6 (vi) – UN Comtrade figures for exports to Lebanon 2010 – 2017.

	2010		2011		2012		2013		2014		2015		2016		2017	
HS 100199	Tonnes	USD/t	Tonnes	USD/t	Tonnes	USD/t	Tonnes	USD/t	Tonnes	USD/t	Tonnes	USD/t	Tonnes	USD/t	Tonnes	USD/t
Total					285,492		430,444		456,128		775,539		1,415,615		1,465,871	
Russian Fed.					180,900	264	182,456	240	161,604	229	358,419	169	708,227	162	946,441	173
Bulgaria					47,520	322	34,525	337	27,836	265	81,745	199	185,900	183		
Romania					33,818	281	135,448	311	50,899	262						
Turkey					20,000	260										
Ukraine									194,683	225	234,027	196	412,708	156	396,889	166
Australia							20,536	326	21,102	302						
USA							25,628	328								
Germany							23,850	391								
Total of H.S. 100190 & 199	410,907		413,027		485,379		540,516		481,918		775,539		1,415,615		1,465,871	
Largest supplier	189,840		240,780		199,887		182,456		194,683		358,419		708,227		946,441	
Price	161		220		271		240		225		169		162		173	
Country	Russian Fed.		Russian Fed.		Ukraine		Russian Fed.		Ukraine		Russian Fed.		Russian Fed.		Russian Fed.	
Second largest	134,238		73,262		180,900		135,448		161,604		234,027		412,708		396,889	
Price	233		275		264		311		229		196		156		166	
Country	Ukraine		Ukraine		Russian Fed.		Romania		Russian Fed.		Ukraine		Ukraine		Ukraine	

5.0 Flour Imports (and Exports)

5.1 Introduction

Flour imports from Turkey, and the Ukraine have been increasing in recent years, mainly through the involvement of one of the principle bakers. These are particularly in contention in Lebanon as they are most likely to be flours which conform to the specifications for the manufacture of Lebanese bread. There are, and have been for many years, imports of different flours from different regions, in relatively small volumes for blending and the baking of bread and pastry/dough products in the European or North American style. However these recent imports have given rise to concern as they now directly compete in volume with production of T85 flour in domestic mills, and potentially present a threat to the long-term sustainability of the milling sector in Lebanon. Therefore recent trading figures are presented below. Full tabulations from UN Comtrade and Lebanese Customs are given in Appendix section Ga4.

5.2 Type 75 imports

Table 5.1 gives the figures for the second half of 2017 and 2018 annual flour imports as recorded by the General Directorate of Cereals and Sugarbeet. Each mill from which the flour is sourced has to guarantee compliance with equivalent standards as the Lebanese millers, and the flour is inspected on arrival¹⁵. Paperwork for each cargo is submitted to the Directorate who approves it for import. The GDCS records show the source of the flour, its intended recipient as well as volume and type (as per Lebanese standards).

Table 5.1 Summary of second half of 2017 & 2018 annual GD figures for flour imports as recorded by the General Directorate of Cereals and Sugarbeet

	(2nd half) 2017		2018		
Country	Kg	%	Kg	%age	Avg price (1) USD
Turkey	5,265,676	38.2%	19,744,285	54.02%	322
Ukraine	2,632,836	19.1%	5,084,871	13.91%	282
Netherlands	1,913,997	13.9%	3,888,276	10.64%	424
Germany	1,632,238	11.8%	2,887,097	7.90%	486
France	1,607,618	11.7%	3,007,436	8.23%	552
Belgium	200,220	1.5%	400,880	1.10%	460
Italy	187,990	1.4%	506,266	1.39%	735
Cyprus	129,560	0.9%	217,655	0.60%	467
UAE	120,900	0.9%	520,918	1.43%	1,539
Canada	101,831	0.7%	284,350	0.78%	638
UK	0	0.0%	1,920	0.01%	1,094
India			5,320	0.01%	507
	13,792,867	100.0%	36,549,273	100.00%	
Of which					
Flour type 75	1,994,339	14.5%	13,170,490	36.03%	

Note: This is derived from Lebanese import figures for 2018

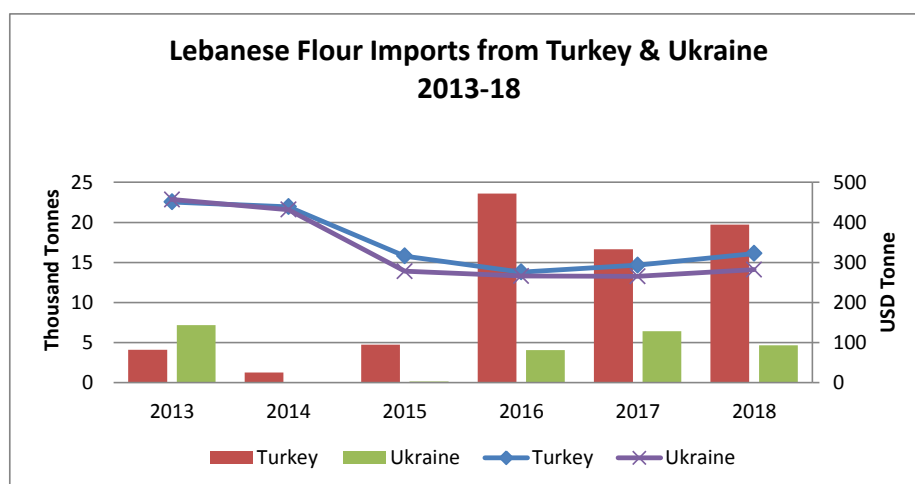
¹⁵ Decision 15 Ministry of Economy and Trade of 11 May 2017 that wheat flour imports will be monitored from one month of that date, i.e., 11 June 2017.

However, the total imports of flour type 75 accounts for approximately 13 thousand tonnes or 36% of the import figure in 2018. This compares with deliveries to Lebanese bakers in the same period of approximately 305 thousand tonnes; thus imports comprise some 4% of total flour available to the baking market. However, although this percentage may be considered small, it is larger than the T85 deliveries of Middle East (5.6)¹⁶, Shahba (8), Bekaa (8.5) and slightly larger than Dora and equivalent to Crown (13.2) mills respectively to the bakers. The question raised is the differing natures of the respective mills and their long-term viability. This is discussed in Chapter 6 below – i.e., the reliance on the income and cash-flow generated by the T85 milling. There has been a significant increase in the amount of flour imports and this may constitute a threat, but in any case should be a guide to policy making.

Table 5.2. Six year data for Turkish and Ukrainian flour imports into Lebanon as recorded by Lebanese Customs 2013-2018.

	2013		2014		2015		2016		2017		2018	
	Tonnes	USD	Tonnes	USD	Tonnes	USD	Tonnes	USD	Tonnes	USD	Tonnes	USD
Turkey	4,103	451	1,235	439	4,704	316	23,592	276	16,631	293	19,726	322
Ukraine	7,171	457	46	432	142	278	4,055	266	6,417	265	4,627	282

Chart 5.1 This chart shows the volume against cif prices of Turkish and Ukrainian flour into Lebanon 2013-18



5.3 Exports

For completion exports need to be considered; whereas in the past there were a number of re-exports to be considered there are now really only direct exports to consider. Table 6.3 shows the exports of flours, milled in Lebanon. Only one respondent reported exporting, although, with current difficulties in exporting – excessive 'fees' at border crossing points etc., land exports are no longer really feasible, and this increases overall costs to the end-user, particularly in Saudi.

¹⁶ Figures in thousand tonnes

Table 5.3 Exports from Lebanon given by Lebanese Customs and UN Comtrade for the period 2013-17 of HS Code 110100 – wheat or meslin flour. Total volume – countries and percentage

		2013	2014	2015	2016	2017
Lebanese Customs (exports)	Weight (total) Tonnes	37,534	14,369	10,382	8,621	907
	Countries	Syria 98.3%	Syria 91.9% Saudi 3.8%	Syria 90% Saudi 8.3%	Syria 91.3% Saudi 8.0%	Saudi 90% Iraq 5.6%
UN Comtrade (imports from LEB)	Weight (total) Tonnes	7,078	934	30,850	1,506	480
	Countries	Angola 87.4% Togo 5.8% Saudi 4% Jordan 2%	Angola 49.6% Saudi 27.0% Togo 12.9% UAE 2.7%	Angola 76.4% Guinea 20.4% Saudi 2.5%	Sierra Leone 50.5% Saudi 45.6% Sweden 2.3%	Sierra Leone 74.8% Uganda 20.4%

Local producers are unable to explain the exports listed by UN Comtrade, and assume these are misattributed.

5.4 Wheat Imports by Mill

Table 5.4 gives the macroscopic view of the wheat and flour market in Lebanon (exclusive of domestic wheat production). The imports of wheat given in Table 5.4, column 2 listed by Beirut Silos for the Beirut landing figures and Lebanese Customs for Tripoli for Tripoli in 2018. Column 3 gives the percentage of wheat landed by port. Privileged information available to the GDCS tells us that there are mills with significantly greater purchasing power than others, and over time, and indeed historically have acted as purchasers and traders on others behalf. This report concerns itself only with the wheat purchases and T85 flour, but the purchase and trading of other grains (corn, for example, and grains for animal feed) is a significant contribution to a number of the mills' business and viability. Other factors that come into play in this context is the availability of storage; or conversely reliance on storage at the Beirut Silos facility and the relative costs.

Column 4 gives an estimate of the flour available from the wheat imported – calculated at a 78% conversion rate, although some mills claim 80% efficiency, offering the total amount of flour available for baking – and is of different qualities and variety – Chapter 4 shows the origins of the imported wheat. Column 5 shows the amount of T85 flour milled and distributed to bakers – thus the difference between column 4 and 5 may be ascribed to flour available for other purposes – blending to produce other baked products, for example soft European style breads, pasta, pastries and other confectionary style products. Additionally it also should be noted that in those columns the imported flour has been added – giving a total of 481 thousand tonnes of flour available for baking, some 318 thousand is of the T85/75 grade available for the baking of Lebanese bread – some 66% of all flour. Again, it should not be assumed that all this flour is used for the manufacture of the plain traditional Lebanese bread with which this report is concerned – many of the larger bakers prepare many varieties of flatbread, of all manner of types, as part of their large range of products. Although it may be assumed that the majority of small bakers only use it for such.

Table 5.4 Wheat imports by mill, flour equivalence, T85 flour distributed 2018

1	2	3	4	5	6	7
Source	Beirut Silos/Customs		78% calc.	GDCS		
Imports	Imports of Wheat	%age imports	Flour equiv.	T85/75 Flour	%age total milled flour	%age T85/Tot. flour
	Kg		Tonnes	Tonnes		
Total Imports -Beirut	485,498,436	85%	378,689	263,865	86.6%	69.7%
Total Imports – Tripoli	84,164,541	15%	65,648	40,683	13.4%	62.0%
Total	569,662,977			304,548		
Imported T75 flour			36,550	13,170	4.1%	
Totals			480,887	317,718		66.1%

5.5 Import tariffs, and impact of flour imports

Over the recent couple of years the increase in the T75 imports of flour have increased in turn call for tariffs to be imposed as it is suggested that these imports threaten the long-term livelihood of smaller mills.

A discussion of the impact of such a tariff is given in Section 6.7

6.0 The Milling Sector – The Mills

6.1 Introduction

There are two reports that mention the milling sector in Lebanon, and these are outlined below. It is a small, tightly knit sector with a strong Union and many personal ties, which both, through a long and intertwined history ensure that although these bonds are strong they possibly blind the sector to the current economic climate and economic and commercial necessity.

The Blominvest Bank report⁽⁴⁾ (2016) identifies thirteen mills in Lebanon at that time, with 2 in the Bekaa region, 1 in the north, 1 in the South, 3 in Beirut and 6 in Mount Lebanon, and offers the following as the market share of the principal mills:

- Crown Flour Mills 24%
- Bakalian 18%
- Modern Mills 13%

The current report considers 12 mills, one of which in the start-up phase and just now operating commercially owing having had teething difficulties. Additionally a new mill in the Bekaa region has been granted a licence by the Ministry of Industry. At the time of writing no information was available on this operation. The mills here are described in general terms as to their overall performance and output, and their share of their market.

The only known previous published assessment of the milling industry is the WFP document⁽³⁾ - Lebanon Milling Assessment. This document appraises the following companies:

- National Flour Mills
- Crown Flour Mills
- Big Mills of the South
- Middle East Flour Mills
- Shaba Mills
- Baraka Mills

It looked at the key areas of;

- | | |
|---|---------------------|
| - Facilities including electrical supply | - Overall condition |
| - Milling Equipment | - Pest control |
| - Other supporting equipment (de-stoning plant, bag washing etc.) | - Security |
| - Staffing | - Access |
| - Weighbridge | - Capacity |
| - Buildings | |

It is believed that this assessment was carried out in relation to a WFP flour purchase programme for the support of the Syrian refugee camps within Lebanon. A contract was awarded and a number of the mills acted as a consortium to fulfil it.

6.2 The Mills

6.2.1 Introduction

This report was researched by conducting individual visits to each of the 11 mills operating at the time of the study, carrying out a semi-structured interview, and completing a pre-prepared questionnaire. The team was welcomed in all mills, and was invited to tour the facilities of each. After every visit a report was completed and filed. This is the first complete survey of all the operating mills in Lebanon

Table 6.1 Mills visited

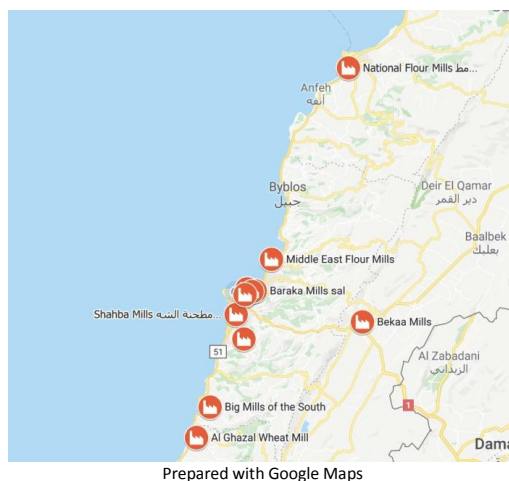
- | | |
|-----------------------------------|-----------------------------------|
| - Crown Flour, Beirut (1952/1995) | - Big Mills, Sibli (1981) |
| - Bakalian, Beirut (1908) | - Shahba, Borj El Barajneh (1968) |
| - Middle East, Zouk Mikael (1964) | - Assaf, Bchamoun (1985) |
| - Dora, Beirut (1919/1960) | - Bekaa, Saadnayel-Zahle (1979) |
| - Baraka, Beirut (2003) | - Modern Mills, Beirut (1965) |
| - National, Tripoli (1988) | |

The mills that the team still hope to visit are:

- Al Ghazal, Sidon
- Bekaa #2, Bedayel

The mills are highly clustered, with four outliers. The mills of Crown, Bakalian, Dora, Modern, are clustered near the port in Beirut, with Shahba mills in (what are now suburbs) South Beirut on the borders of the Palestinian refugee camp of Borj El Barajneh. Middle East Mills is in Zouk Mikhael, Metn, Assaf in Aley, Big Mills of the South, Sibli, Chouf, National in Tripoli with Bekaa in the Bekaa valley. Each of the smaller mills has usually found a way in which to survive in constrained circumstances, but as will be discussed all mills are suffering because of straightened times, and some are suffering more than others. Chart 6.1 shows the geographical layout of the mills. Of the two new mills Al Ghazal in the South might obtain a market advantage in this area and the potential mill in the Bekaa valley will compete with Bekaa Mills.

Chart 6.1 Map of Lebanon showing the geographical dispersion of the mills.



It is generally held that the sector has significant over-capacity, but is often exaggerated, with some suggesting it is by a factor of 4, in fact, the study suggests that actual operating capacity is actually installed capacity to mill wheat is about twice that of the wheat imported in 2017 – which is when recently imports have been at the maximum of about 640 thousand tonnes and operating volumes about 1,000 tonnes per day less. This turns into an operating volume of approximately 2,800 tonnes per day, with 640 ktpa meaning approximately a need for 1,800 tonnes per day. This is without the additional capacity of the new mills, which additional capacity has given rise to concern with the Millers' Union which feels it ought to have been consulted by the Ministry of Industry before granting new licences.

Because of this oversupply the mills are constrained as to the market strategies that they are able to follow, they are reliant on price, quality and product differentiation. For T85 production they are restricted to price/volume, delivery and their relationship with the baker.

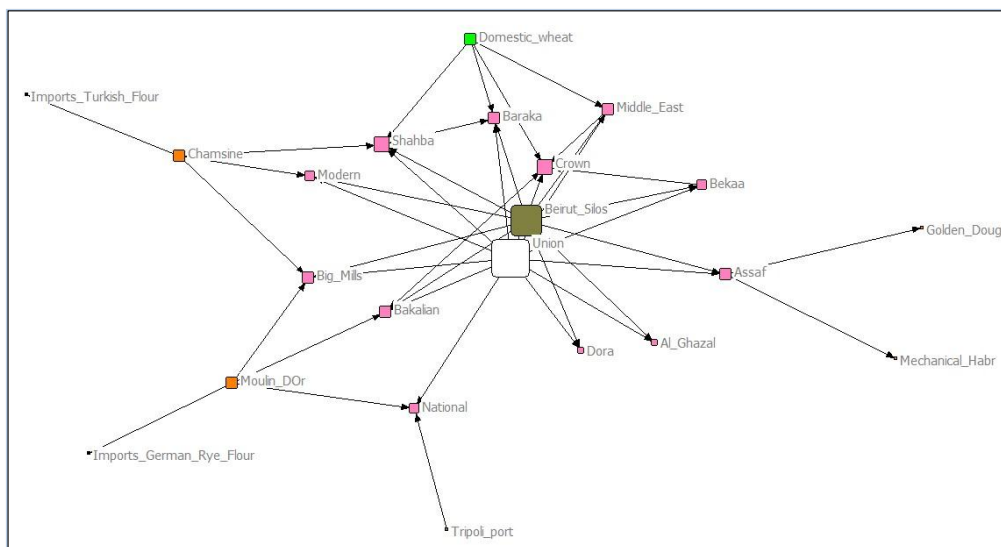
On an historical note the mills have a rich and varied history, most of them are run by families with a long tradition of milling, with strong representations from Armenian and Syrian communities who have been established in Lebanon for generations, some of whom have extended family milling overseas. The mills themselves in their current locations have been established since the turn of the 20th century, although changing ownership, for example, one miller taking over a mill established by one of the old convents. A following phase took place in the 1960s with new mills being established, a phase of modernisation at the time, a third phase in the 1980s and 1990s with extensive modernisation and development. The millers form a tight knit community with much mutual support. The sector is under pressure from the current Lebanese economic situation; with margins being squeezed

There is a current phase of development as mills modernise, bringing the latest technology, food safety, health and employee safety standards to the industry.

6.2.2 Mill Sector Clustering and Impact

Chart 6.2 shows the relationship between the mills and selected inputs and outputs, in addition to inter-business relationships. These are worth noting as the sector can be recognised by the closeness of its relationships. Firstly they all share a relationship with the Millers Union, whose current chairman and spokesman is the owner of Dora Mills – as suggested before there is a clear and close relationship, although avowedly competitive, amongst the members of the Union, although some mills have suggested that not all comply with agreements made in the Union.

Chart 6.2 A relationship diagram of the mills with selected bakers and the ports



6.2.3 The Mill Cluster

The diagram 6.2 demonstrates the relationships between the mills, selected suppliers and customers; and their trade body and the ports. Within this set of relationships there are a number of issues which can be discerned. The first of these is the relationship between the Mills and their Union; which takes a lead role in negotiations with the Ministries - the industry is also prominent in the Syndicate of Lebanon Food Industries. The second important aspect is the dominance of certain players within the sector.

Another binding cluster focuses the Mills – bar National – on Beirut Silos, with which the mills are obliged to operate with. There are tensions amongst the mills with each seeking to gain additional market share, and competitive advantage, but also between mills and traders, as would be expected, families having interests in their own and others' mills, and upstream and downstream facilities, from the port facilities to family bakers and plastic bag manufacture. Most mills sell on excess and rough brans for animal feed, and traders deal in corn and grains again for animal feed.

The two new mills are potentially a disruptive factor within the sector, and will change the dynamics of the industry through increased competition.

6.3 Industrial Strategy

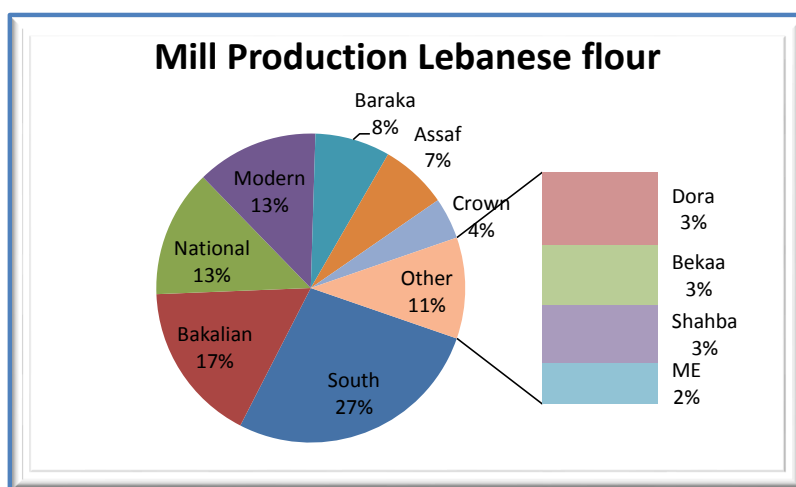
6.3.1 The Core Business

Within the milling sector of Lebanon the production of T85 for the baking of Lebanese bread is still core. Chart 6.2 indicates the degree to which each mill is still dependent on T85. This indicates on reported figures (production of say 305 thousand tonnes per annum, and a total estimated potential flour production of over 900,000 tonnes a third is dedicated to T85 production. Thus it is still core to the sector as a whole, however, by inspection some of the mills have greater dependency on this particular trade.

Key areas to success in the domestic market, in order, are credit terms offered to the customer, keen pricing, and the relationship with the customer, and as noted by one mill there is a degree of confessional sectarianism in market acceptability. Charts 6.3 and 6.4 show the T85 distribution by mill to the bakeries, the percentages shown in Chart 6.4 are of the total domestic production of T85 as recorded by the GDSCS.

Export markets are difficult – local markets are dominated by cheap Turkish flour – although there are rumours in the market place that the subsidy regime in Turkey is to be reduced or abolished.

Chart 6.3 Annual distribution from mills to bakers of T85 flour - 2018



6.3.2 Niche Markets

Given the above, the companies are obliged to seek new markets; the principal mechanism, apart from price, is to produce innovative products. Examples of these are the range of consumer retail (packaged) flours prepared by National Flour Mills for the domestic market. These include, for example multi-seed, pizza, soft bun, Vanilla Muffin & Cream Cake or Pizza! Crown Flour Mills produces 13 different flours. In Bourj Brajneh, Shahba Mills, because of the local conditions, and the pressure on the company to restrict lorry access, and milling time he has developed a range of (bulk flours for bakers), up to 30, for example, semolina, yellow flour, flour for pastries and pasta. The company has focussed on quality, and the premium market, rather than volume. To this end the company has invested in a greater proportion of sifters than other mills specifically for the production of fine semolina.

Other approaches have been to obtain the approval for branded products, e.g., for the preparation of flours for KFC and Pizza Hut (Yum! Brands) (Crown) and to provide flours to the bakers who prepare the approved buns for Burger King and McDonalds – i.e, with the right density and crumb amongst other characteristics (baking is a science now, not an art!).

6.4 Modernisation, Safety and Quality standards

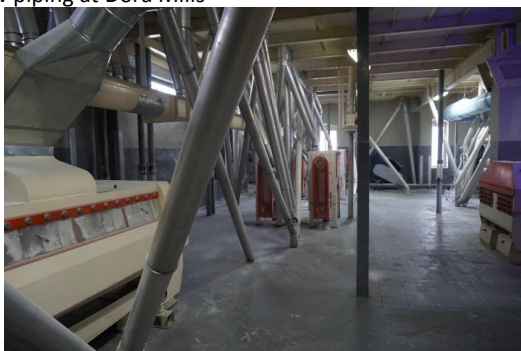
There are a number of incentives for the mills to modernise and upgrade their facilities and their equipment. These are principally the HACCP and ISO 22000. These include necessities for securing the facilities, guest/visitor signing in, restricting access; ensuring that all surfaces can be easily sanitised (using polyurethane paints, floors and walls, etc., ensuring full washing, cleaning and hygiene facilities, protective clothing, these are some of the more obvious, but will also need to update machinery for access, cleaning etc. – which in turn will require more sophisticated milling equipment management systems to be able to take sections on and off line as required. Each of the mills provided details of their current status and the quality certifications that they have achieved to date. In addition weit adds a column showing which mills are developing 'green credentials' usually as a result of need, however, still beneficial.

Again in responses to the questionnaire, the ability of the smaller mills to modernise and to achieve any certification is hampered by the lack of access to credit.

The standards sought, and being achieved by the millers are ISO 22000 (8 mills to date), ISO 22005, FSC 22000, HACCP for food safety, hygiene, plant management, ISO 9001 for management competencies (denoted by year of grant) and individual food certificates required by confessional groups, food manufacturers and retailers, e.g., YUM! Brands, KFC, halal certified, etc. Those mills that have yet to achieve these are working toward them. All mills are can be inspected by the Ministry of Agriculture to ensure standards are being met, and the MoET (GDSCS) has an oversight that all requirements are met for the production of flour for human consumption

A typical milling sequence is shown in diagram 6.4 following. The following photographs show different aspects of the modernisation programmes being run by different mills. Each of which ensures compliance with various standards – and also improves food safety, factory safety, and worker safety. For example fine flour is highly combustible therefore reducing the risk of spark from static is more than a cleaning issue. Dora mills have just completed the removal of PE pipes

Photo 6.4 – new piping at Dora Mills



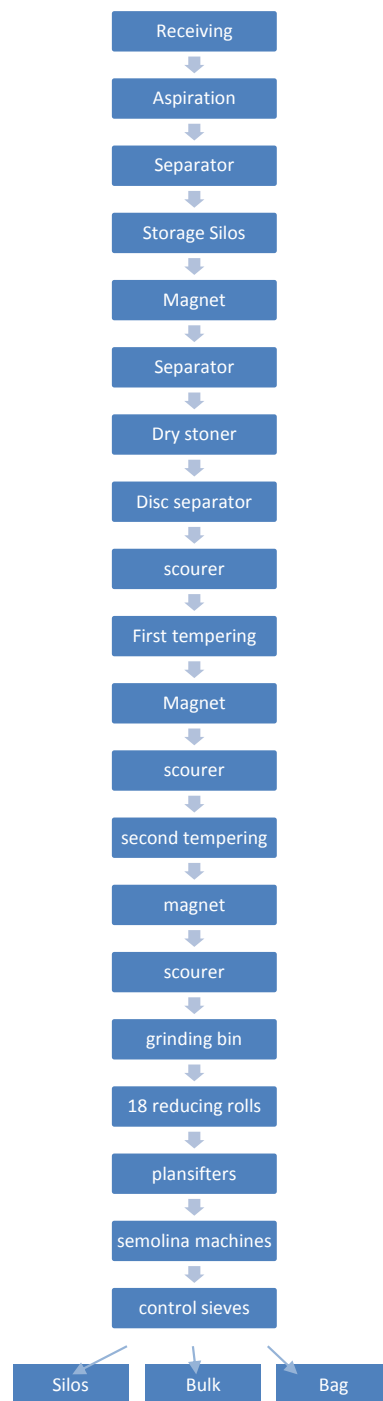


Diagram 6.4 (courtesy of Big Mills of the South) shows a typical milling sequence.

Photo 6.5 State of the art technology a Sortex B camera sorting filter from Bühler



Photo 6.6 A modern Milling Floor at national Flour Mills



Issues that are being addressed by the mills are the removal of old equipment, and replacement with modern equivalents, improvement of safety standards – these standards often change on an annual basis. As noted in the following paragraphs this is expensive, and the current economic climate in Lebanon has made obtaining credit, or indeed dollars for the purchase and installation of equipment difficult, if not impossible for some mills.

6.6 Issues currently concerning the Milling Sector

6.6.1 Introduction

The following paragraphs describe the issues raised to the research team by the mills during the period January- March 2019. Apart from specific areas which are identified and discussed elsewhere, e.g., Beirut Silos, and various operational issues, the main areas of concern are those dictating the business environment, in particular financial aspects some, directly, others indirectly dictated by the political management of the economy through the central bank to the commercial banks. Possibly the second most inflammatory subject is that concerning the import of 'subsidised' flour from Turkey.

6.6.2 Financial Constraints on Performance

6.6.2.1 The Economy

In general the current state of the Lebanese Economy has, and is, a significant drag on the operations of the mills (and the larger bakers). In broad terms the indebtedness of the State, approximately 1 ½ times the GDP, making it in these terms the third most indebted country in the world, means that approximately half of the income of the state (through taxes, bond issues, etc.) is spent on servicing this debt. Another significant liability is the fund transfers to support Electricité du Liban, further liabilities are the running of services; in turn exacerbated by the Syrian refugee influx, funds transfers to municipalities in 2018; all this means that the Government is increasing the national debt, and the state needs funds to support its expenses, e.g., fuel for EdL. Cash flow, in a simplified explanation is funded by commercial banks depositing money with the central bank which encourages this through extending attractive interest rates to them. Extensive subsidised loans (now ceased) to the construction sector increased the problem. This has the consequence of increasing interest rates to the commercial sector with the effects on normal commercial activities described below. And, leads to the 'austerity budget' that the country is currently facing.

6.6.2.2 Restrictions on USD availability

In the early phase of this research this was the common complaint of all millers interviewed. Owing to restrictions placed by the central bank, and the high interest rates that the commercial banks were receiving from the central bank for USD deposits it was becoming increasingly difficult for millers to obtain the dollars they needed to satisfy LCs for inbound cargo. Or in some cases were unable to trade at all. In some cases this is still occurring, and in a single case one mill reported having had no issues at all.

This was resolved to some extent throughout the course of the study, however, the millers would still prefer, and still seek, the purchase of wheat by Government and selling to domestic mills in Lebanese Pounds. It should be noted that the millers' Union at one point was, or indeed made it known, that it was prepared to cease milling to achieve its aim.

A corollary of this is that the mills would like to reduce their currency exposure by invoicing the bakers in USD rather than local currency; albeit a general remark it is assumed that this principally refers to the larger bakers as the smaller bakers will not have easy, or cheap, access to dollars. Commercial invoices, where the customer is not the end user, maybe in dollars or local currency, however, the Consumer Protection Department of MoET

discourages the mills, insisting that invoices should be in Lebanese Pounds. Retail invoices must be in local currency.

Owing to credit periods – see below – mills have suggested a mixed regime of invoicing in local and future settlements being settled in USD. How this would work remains unclear.

6.6.2.3 Interest rates

A further corollary of the above situation is the high interest rates being offered in local Lebanese Pounds by the banks; this has had two consequences

- The first, and significantly creating a credit squeeze is the reluctance of the bakers to pay the mills according to custom – i.e., 30 days¹⁷, or at least 60 days, with at least one miller indicating a creditor period with particular clients of up to 180 days and a creditor book in excess of USD 1.5 million. Most mills report extensive difficulties in obtaining payment – a frequent baker tactic is the issuance of post-dated cheques which are then not infrequently dishonoured.
- The mills thus declare that they are funding the bakers – and, indeed acting as a banking resource. This has an impact on operational profitability. And is increasingly causing resentment – but the mills are concerned over the competitive nature of the market place – *de facto*, the most financially resilient will gain. In addition there has been a small, but definite increase in defaults amongst smaller bakers
- The second is the impact this has on commercial funds for business development, modernisation or enhancement of plant, e.g., implementing safety measures in the factory. This has greatest impact on the smaller and financially weaker mills.

6.6.3 Maintenance of wheat stocks (cost and storage)

The Mills complain that they have to bear the cost of purchase and storage of wheat stocks by ordinance of the Government, and feel that there should be an element of compensation. This is particularly so where the mills are obliged to use either Beirut Silos or another companies storage facility having little or no spare capacity, thus adding a significant overhead. This principle for this is set out in the legislative decree of 1959¹⁸, and this has been agreed at not less than a 3 month supply.

‘Upon the approval of the Council of Ministers, oblige the mills to permanently keep a minimum stock of wheat grain.’

6.6.4 Cost of energy - electricity supply and generator fuel

This is a major source of contention; each area of the country receiving differing levels of local supply, therefore requiring differing levels of generator support from the range of Beirut of some 3 hours a day to the requirement to run on generator power full time. In some areas the intermittence of supply can cause damage to systems and operations requiring the installation of (expensive) systems to manage. These include:

- 24 hour generator usage; expensive and significantly increase energy costs

¹⁷ I use the term ‘custom’ as in many instances there are no formal contracts

¹⁸ Legislative Decree n.143/59 Article n.4 para. 9

- Photo-voltaic cells (PVC), beneficial but capital intensive and not available to all

6.6.5 Restrictions on purchases of low protein wheat

Low protein wheat is required for the milling of flour for Lebanese flatbread; however, a decision at the Ministry of Agriculture was made that low protein wheat was only fit for animal feed, and therefore would not be allowed to be imported for human consumption. This needs to be addressed.

6.6.7 Multiple Ministry interventions

A frequent complaint from the millers is the multiple Ministry interventions – both the time, and interruptions to business that they cause; they would all seek a simpler, co-ordinated approach by the Ministries, particularly where it comes to flour testing – where given their own laboratories (in the majority of cases) – they complain of duplication and unnecessary costs. A schedule of the Ministerial interventions is given in Chapter 9. For the current account, the Ministries involved are:

- a. Ministry of Industry
- b. Ministry of Agriculture
- c. Ministry of Public Health
- d. Ministry Economy & trade
 - a. GD of Cereals and Sugarbeet
 - b. Consumer Protection Department (Routine inspection of weight, labelling, date and shelf-life)
- e. Ministry of labour
- f. Municipalities

6.6.8 Flour Delivery Reporting

Under an established reporting system which actually relates to the payment of National Social Security Fund dues by the small bakers all mills have to report the T85 flour delivered to each baker, by month. Although this is an excellent data resource it has also led to a number of different allegations. It is noted by the researchers that security breaches reported some years ago are resolved, but that due vigilance must be maintained.

However, there remains the conundrum of why flour delivery reporting remains tied to national security fund payments for some bakers, but not for all – as it is assumed all are registered as businesses and pay taxes and dues accordingly.

6.6.9 Complaints system

Companies are concerned that if they make a complaint against some practice of a Ministry or intervention, or an aspect of the sector they will face sanction by the Ministry

6.6.10 Other areas that the mills feel that Government may assist

- Taxation – mills are taxed at a rate and system that treats them as large companies because of their turnover (wheat is 95% of the price of goods) and margins on Lebanese particularly are very small if extant.

- Large mills are looking for export market opportunities and seek government assistance
- Financial assistance for the modernisation and development of the sector – some mills are at the forefront and are investing (heavily) in food quality and safety development at their own expense, some mills do not have the financial ability to do this. They will all cite Turkish competition where the state actively offers assistance and therefore adds another mechanism to subsidise flour production.
- Local urbanisation has become a problem in parts of the capital and its suburbs; with transport difficulties – one mill in southern Beirut has (over time) replaced its fleet with smaller capacity vehicles. Others complain over the unrestricted development in East Beirut with high rises crowding out the mills and their yards – and consequential travel issues. Although it is understood that there is a programme of industrial zone development it has been said that none of these are suitable for mill development – and this would incur substantial cost in any case.

6.7 Turkish (and Ukrainian) flour imports, and tariff protection

A letter concerning the Turkish subsidy regime was submitted to the MoET by the Millers' Union some two years ago. It is reported that all flour exports from Turkey are subsidised by offset agreements of one sort or another, but for (Turkish) domestic reasons these might be stopped. The cif price of the flour is cheaper than the domestically milled price of T85 flour and thus represents competition to it. As described elsewhere this reached some 13,000 tonnes in 2018, which exceeds, or is equivalent, to the deliveries of T85 from five mills in Lebanon. For three of the mills this is not an issue, but for two it is potentially threatening where their livelihood is dependent on T85 at small quantities. Other mills dependent on T85 are much larger, therefore current imports do not constitute a threat.

6.7.1 Tariff Protection and Sector Vulnerabilities

Tariff protection for the mills against imported T85/T75 flour is sought by the Millers' Union, however there are in this author's opinion some caveats that should be put in place if this demand is met. Vulnerabilities of the sector are not limited to the imports – the other principal factor which has consequences, is the interest rates demanded by the commercial banks. This has limited the willingness of many banks to offer credit for business development, and secondly, but no less importantly has encouraged the bakers to retain monies that should pay the invoices of the millers and deposit them with the banks – who in turn lend to the central bank. This has increased the vulnerability of the entire sector to a major credit default.

The other vulnerability for the smaller mills is the increase in sector capacity offered by the coming on stream of the two new mills, providing it is assumed modern efficient production facilities. There is ample excess capacity in the sector to absorb

It is the author's considered opinion that if the tariff really is to protect the sector the tariff will become permanent unless a *quid pro quo* is sought from the Union. A better offer would be for a term, renewable tariff regime, with the aim of protecting the mills long enough to upgrade/modernise assist them to achieve certification, or to compile a complete status report and help to resolve their cash flow issues.

Additionally the Ministry should seek to reduce the credit block, without which they, and other, mills cannot achieve the funds they need to modernise, or carry out remedial works. In concert with this the Ministry should use its influence to reduce the misuse of trading terms, and it should be suggested that the Union introduce a standard form of contract and terms of business to be universally applied. It is suggested that this should be part of a consultation process with the Union. As the Union also seeks assistance in other areas for example training and export promotion the Union will have to accept changes in the sector to obtain the benefit of Government aid. It is also not known whether the new mills coming on stream will participate in the Union activities and consultations.

The short potential respite offered should be used to provide export assistance to the sector, and in concert the industry should research and develop its own export market opportunities. Thus tariffs thus should act as a temporary shield and should be used as an agent of change to induce modernisation and development.

So from tariffs, to

- Modernisation
- Development
 - o Product lines
 - o Import substitution
- Training
- Export Drive
- Resolve cash-flow issues (with government assistance)
 - o Relieve the bank credit block
 - o Control invoice payments
 - o Standard forms of contract
 - o Standardise terms of trade

6.8 Flour Pricing

The price of flour is 'set' by the mills through the Millers' Union, is unregulated; for example earlier in the year of writing, the Union declared that the price of one tonne of the T85 flour would be LL 550,000 (USD 367). However, as noted earlier in the text it was stated that pricing was a key element in the marketing of flour; thus this will tend to be the maximum that any baker would accept for this flour, and contract and delivery prices will usually be lower – one miller sticking to the price reported a rapid and significant fall off in sales.

6.8.1 Historical

Unfortunately as in many other areas a historical record of prices is not available in the GDSCS. Prices are being researched.

6.8.2 WFP Contract

The World Food Program (WFP) contract was initially contracted to one of the group of mills in the Dora/ Beirut River corniche areas of Beirut, Dora Mills itself being one with three others as part of a consortium. It is understood that the mills achieved a price of USD 360/tonne (540,000 LL/tonne).

6.9 Conclusion

6.9.1 Capacity

The sector has a significant over capacity for solely supplying the domestic needs of the country for flour. It currently stands at about twice current domestic demand, but will increase as new mills come on-stream.

6.9.2 Credit and Currency squeeze

The sector, in common with the rest of the domestic commercial market, is suffering severely from a serious credit squeeze which is having several immediate effects:

- Cash flow problems that are affecting small mills significantly more than the larger ones
- A lack of funds being made available for the modernisation/development of the mills
- A lack of dollar availability for the purchase of wheat imports

Each of these has a slightly different cause, but all maybe related to the Central Bank (Banque du Liban, BDL) maintaining high interest rates, encouraging bakers particularly to hold cash rather than pay bills, and thus making the millers bear the cost of credit.

6.9.3 Interventions with the Millers

The different interventions in the sector are discussed in several sections of the report, but in summary the four areas where, apart from a supervisory or regulatory role, the Ministry has, or may play a part are:

- Price of wheat
- Fixing or imposing a ceiling on the flour price
- Imposing protective tariffs on imported flour
- By extension – the fixing of the bread price

Additionally the Government imposes a stock holding requirement in case of national emergency on the millers. All of these are discussed in some detail in respectively Chapter 4 and Chapter 11.

7.0 The Baking Sector

7.1 Introduction

The baking sector has changed dramatically over the last two decades with the development of the smart patisseries with an offering of over 1,500 products, the Lebanese bread being but one, although significant line. The expansion of the companies offering these has led to a concentration in the industry as will be seen in the paragraphs below, with a contraction in the industry from maybe 3-5,000 artisanal and small bakers to a few hundred now – enumerated in the paragraphs below. The focus of this report is the consumption of T85 flour, principally of that produced by the domestic millers, but the imports, although minor, should be considered in the overall shape of the baking sector. Table 7.1 shows the volume distribution of flour used for the baking of Lebanese Bread within Lebanon. Geographical distribution is graphically shown in the paragraphs below.

The principal reason for the inception of this study and report is the regulatory pricing of bread. This is currently fixed at USD 1.00 or LL 1,500 per Kg. A significant part of the cost is the wheat, it's milling, and subsequently its baking. This chapter looks at the bakers, and notes significant differences between the major 'industrial' scale bakers and the small, local bakeries. The price of bread, per se, is discussed in Chapter 11. As a part of the value chain consideration has been given to protecting the millers – discussed in the preceding Chapter - and fixing the price of flour, although this has not been enacted. One of the main concerns of the larger bakers is the price of bread, and they are currently discussing seeking a unit price increase. The baking cost model is discussed in Chapter 11.

Table 7.1 Flour distribution amongst bakeries of domestic T85 flour in 2018.

Bakeries	Tonnes per annum	%age
Chamsine شمسين	49,982	16.4%
Wooden Bakery الخطب	14,041	4.6%
Moulin D'Or مولان دور	12,889	4.2%
Al Waafaa الوفاء	12,837	4.2%
Al Zoummar الزمار	8,248	2.7%
Green Lebanon لبنان الاخضر	6,986	2.3%
Mill Bakeries المطحنة مخايز	5,394	1.8%
Pain D'Or بان دور	5,294	1.7%
Modern Bakeries of Lebanon الحديثة لبنان	5,037	1.7%
5000><3000 tpa 10 bakeries	37,963	12.5%
3000><1000 tpa 56 bakeries	99,725	32.8%
1000><100 tpa 108 bakeries	43,833	14.4%
100> tpa 69 bakeries	2,314	0.8%
252 enterprises	304,543 tonnes	

Photo 7.1 – A typical modern bakery/patisserie outlet. Moulin D'Or March 2019



7.2 T85 Consumption

The principal consumption of T85 flour is obviously by the bakers. The following tables and associated charts offer the monthly absorption of T85 flour from the mills, by baker. The baking industry in Lebanon is highly fragmented, and fluid, with bakers entering and leaving the Lebanese bread market as the following table, 7.2, shows. It is noted that these are the small bakers, the larger ones have large and consistent turnover of Lebanese bread production. The table 7.1 shows these by the percentage of market penetration, determined by the flour received by each baker, and Table 7.2 the percentage of total delivery to the region by volume. Note that this also gives an indication of turnover by business for Lebanese bread, and is a proxy indication of market penetration. It should be noted that a small number of 'high end' bakers dominate the market, with Chamsine clearly the market leader with 16.4% of the domestic T85 flour market. If the 13,000 odd tonnes of imported type 75 flour added to the total flour available and to Chamsine's share, this ups Chamsine's share of the market to 19.9% - 20% with its nearest rivals reduced to 4.4% and 4.1% each for the next three respectively.

Also to be taken into account is the addition to the Lebanese flour mix of other flours in addition to T85 wheat flour, as bakers have their own recipes. The small bakers usually only use the T85 flour – but do vary the amount of sugar quite considerably.

As noted in the introduction bakers are of three types, a small number of highly modern industrialised operations, which include the likes of Chamsine, Moulin D'Or, Wooden Bakery, with modern outlets and a full and extensive range of products, bread, of various types, patisseries, confectionary, biscuits, traditional sweetmeats as well as the Lebanese bread, and flat breads of enormous variety, as well as servicing for the takeaway meal. A company such as Moulin D'Or avow upward of 1,500 products is a typical example of this, with branches, franchises, and delivery vans for the more remote mountainous areas. The smaller baker, perhaps turning over 700- 1,000 tonnes per year of flour, are baking Lebanese bread only, perhaps some with bran, but supplying their own one, or two outlets – these outlets supplemented with a 'delicatessen' counter catering for the takeaway meal – especially the breakfast meal with local cheeses and some meats – bought in supplemental products, for example, kaak and other flatbreads, and a small range of the 'franje' or foreign

breads – European style soft rolls and ‘hamburger buns’. The third type is the simple ‘corner bakery’ where the only bread sold is that baked on the premises, perhaps with some locally sourced kaak – said always to be baked by an expert versed in the ancient craft of managing the chickpea leavening!

Table 7.2 gives the number of bakers reported in each of the regions of Lebanon – and an approximate number per range of T85 input to give an indication of the pyramidal nature of the industry – domination by a few of the ‘industrial’ bakers and a large number of the small, once artisanal, but now, much mechanised bakers, as described above.

Table 7.2 Number of bakers reported by area; those active in 2018, and the numbers receiving respective volumes of flour¹⁹.

Area	No of bakers reported	No of bakers receiving flour in 2018	Bakers who did not receive T85 in 2018	Tonnes per year						
				10,000 +	5-10,000	3-5000	1-3000	500-1000	100-500	0-100
Beirut & Mt Lebanon	120	86	34	4	2	4	20	9	18	29
North	114	86	28	-	1	3	17	15	31	22
South	61	47	14	-	1	2	9	4	20	11
Bekaa	61	39	22	-	1	2	11	8	6	7
Total	356	258	98	4	5	11	57	36	75	69

In the course of this study the researchers visited four bakers; two of which may be described at the industrial level (see below) and one each of the other two classes.

In terms of quality controls and certification the bakers are seeking/achieving accreditation for the same quality certifications the food industry certificates HACCP, ISO 22000, FSSC and the management certifications ISO 9000/1. This is confined to the large, modern bakeries, as the smaller ones do not, firstly have the resources, and secondly, do have a single production line, or production at the artisanal level and maintain excellent hygienic standards. The photographs below show the different types of baking facility in each type of establishment

7.3 Characteristics of Bakeries

The key lessons to be learnt from the visits made by the team to the bakeries is that there is one major divide; that is the difference between the industrial bakeries and their concomitant retail operations, and the other two ‘classes’ as described in the chapter introduction. The former are modern industrial premises either having achieved typical food and managerial ISO standards; the latter are regulated purely by the Ministry of Public Health and although achieving health and meeting food safety requirements by inspection are very different premises. As shown in Table 7.3. Both of the lower levels we looked at only bake Lebanese bread on the premises using identical automated machinery albeit in constrained spaces. The scale of difference is demonstrated by the market penetration shown in the following charts.

¹⁹ Source: original data General Directorate of Cereals and Sugarbeet which accrues monthly data on the supply of T85 flour to bakers. This data is then passed ordinarily to the NSSF which uses it to calculate the respective bakers Security Fund contributions. Usefully all deliveries to bakers, thus companies, e.g., Chamsine or Moulin D’Or, who are larger and registered as companies and pay according to different criteria are also included.

Photo 7.1 Flour mixing at Moulin D'Or



Photo 7.2 the basement of a typical small baker (in Beirut) showing the end of the proving lines to the left and the oven to the centre.



Photo 7.3 flour storage mixing and proving line for a typical 'corner shop' bakery in Beirut



The charts 7.1 – 7.5 below demonstrate the concentration of capacity and production within the modern industry – and as will be discussed later the issues surrounding the baking of bread and price maintenance and its importance in the structure of the domestic market.

Chart 7.1. T85 flour receipts in Beirut & Mount Lebanon by baker - 2018

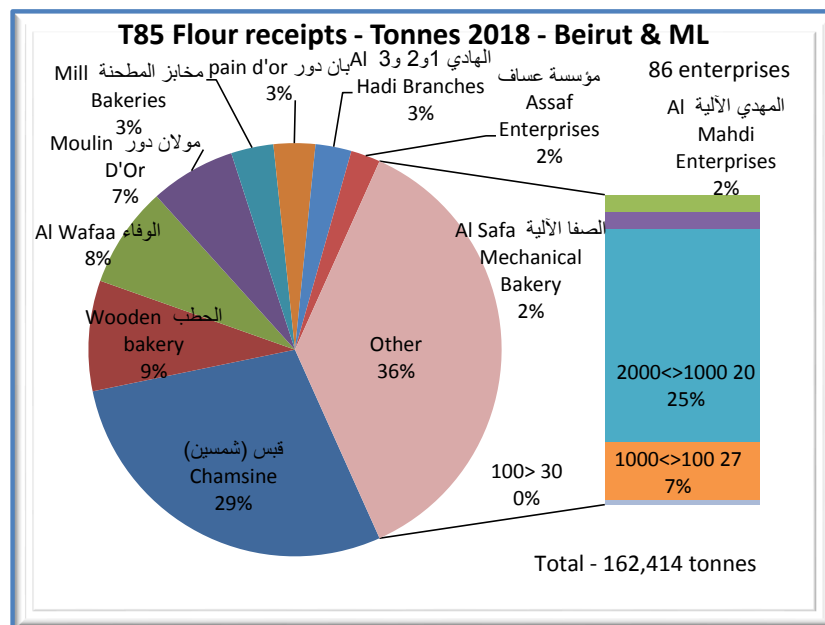


Chart 7.2. T85 flour receipts in North Lebanon by baker - 2018

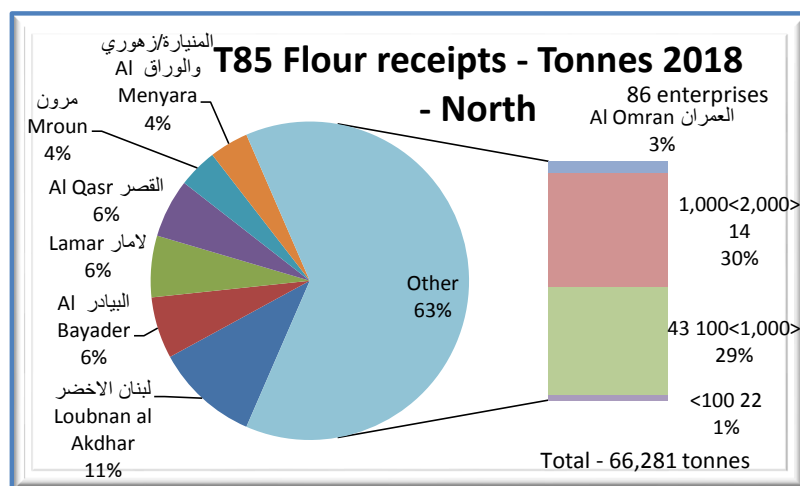


Chart 7.3. T85 flour receipts by bakers in South Lebanon - 2018

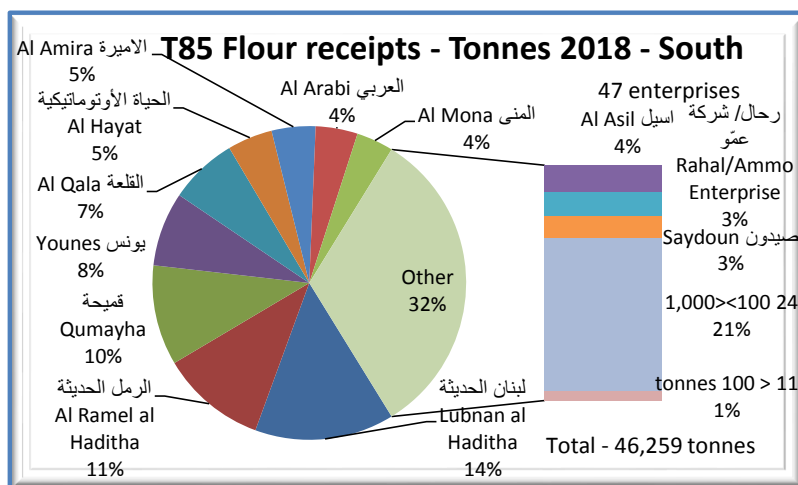


Chart 7.4. T85 flour receipts in Bekaa – 2018

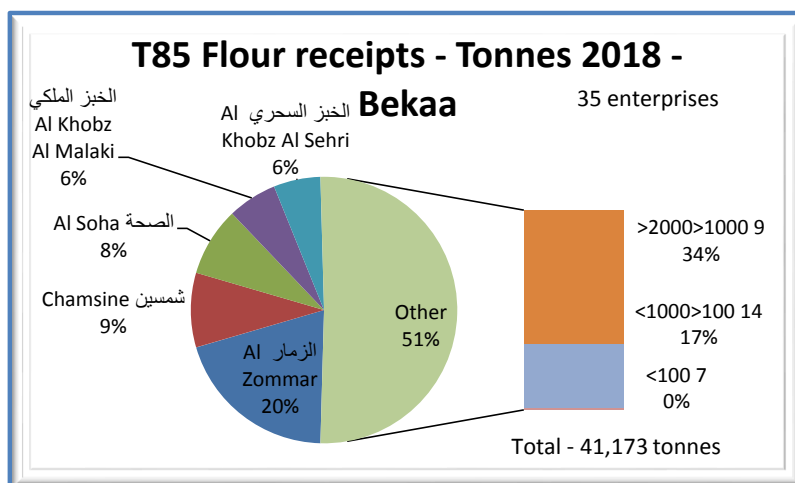
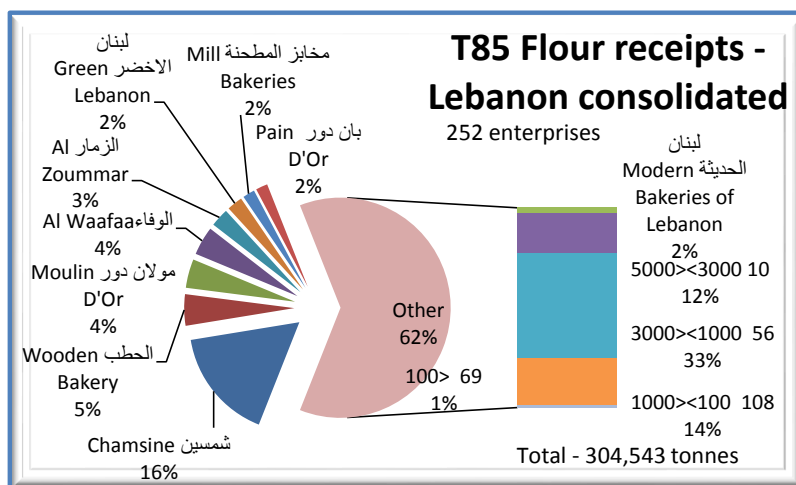


Chart 7.5 – T85 flour consolidated receipts by bakers in 2018



7.4 Issues raised by the Bakeries

7.4.1 Lack of technical skills

One of the major interviewees/respondents noted that the company is very reliant on foreign skilled labour – bakers – mainly Syrian, but also Egyptian and others, and foreign labour. The company was seeking assistance for training programmes to assist local Lebanese to gain vocational qualifications.

7.4.2 Labour permits

Issues raised by the millers are repeated by the large bakers – the disparity and apparent non-conformity of labour permits for foreign labour.

7.4.4 Min Finance – VAT

A particular issue of the bakers is the VAT returns – payments are made quarterly, but recently VAT refunds are now only made annually, this is causing cash-flow issues – although the Lebanese bread is not VATable this is causing issues for the (big) bakers.

7.4.5 Min Health – health checks

The bakers object to the three monthly health checks for all food workers when this used to be an annual requirement and the insistence on the use of government hospitals for these.

7.4.6 Pricing

The large bakers visited had concerns over the bread price; particularly they were concerned that the current price regime did not reflect the changes in the prices of raw materials and constituent components of the costs of production, e.g., ancillary costs of labour (permits, accommodation, social security), fuel, packaging, distribution etc. it is understood that one

of the bakers was to ask for reduction in pack size (to maintain set price) at a meeting with the new minister. This did not occur. Noticeably the small bakers considered themselves satisfied with the current set price and volume.

7.4.7 Electricity

This is a major issue with the bakers, again the large ones with industrial sized operations, although they have generators, there are still issues with loss of production, stock write off, and damaged conveyors if something goes wrong. Chamsine is considering the purchase of UPS systems, whilst Moulin D'Or had redundancy in its back-up power supplies.

7.4.8 Dollar availability

The industrial bakers suffer, but not to the same extent, as the millers with the need for dollars.

7.4.9 Flour supply

In response to questioning – justification for Turkish flour imports – Chamsine reported issues on consistency of domestically milled flour because of the relatively small volumes imported; he also questioned crop consistency in Russia and the Ukraine.

8.0 Ancillary Services – The Ports

8.1 Port services in Lebanon

There are two ports in Lebanon for the discharge of wheat; Beirut and Tripoli. For the off-loading of grain in Beirut, Beirut Silos are the designated partner to the mills by Decision of the MoET²¹. In Tripoli there is one offloading option available, the clamshell offered by the Port facilities which services only National Flour Mills, itself based in Tripoli. All other grain offloads for mills are through Beirut. It should be noted that some grain offloads to particular mills are traded forward to other mills.

For this study it was not possible to visit the port at Tripoli, but a visit to Beirut Silos was made and the following is a report of that visit and its findings.

Additionally within the perimeter of Beirut Ports and on the site of Beirut Silos there is a washdown facility – steam cleaning for lorries that are to carry wheat from the port to the mills. The use of this facility is mandated by a decision²⁰ following a rubbish and waste disposal crisis in Lebanon all vehicles that may have been used for rubbish clearance had to be steam cleaned. This is still mandated and is a source of annoyance to the mills – adding time and expense to their bills.

8.2 Beirut Silos



Beirut Silos is a hybrid company, with a complex legacy, however it comes under the authority of the Minister of Economy and Trade and under the oversight of the DGCS.

Beirut Silos provide a pier and berthing with discharge facilities for ships bringing grain to the mills in central and southern Lebanon. As noted the ships, mainly coastal traders, are discharged via the pneumatic system to either waiting lorries for onward transmission to the mills – or to storage within the silos themselves. The Silos organisation comes under the oversight of the GDSC of MoET.

The Silos berth can accommodate ships of 50 to 60 thousand tonnes; however some 70% of the ships are in the region of 3,000 to 7,000 tonnes. The next range is in the 10-15,000

²⁰ Minister of Economy and Trade Decision 23 of 28th July 2017

tonnes with a few of larger capacity. This has been the case for some 10 years. Prior to that larger ships were the norm when the majority of the imports utilised the larger Panamax vessels with cargoes from North America.

Ships can be turned around in one or two days. However, certain mill owners, notably Big Mills of the South, with larger vessels, and varied requirements – part storage – part discharge to lorries for delivery to mill can have longer periods berthed.

Installed capacity of the two pneumatic unloaders is some 600tph (≈ 300 tph ea.) however actual current operating capacity is approximately 450 tph. This is the original equipment installed circa 1969.

The silos themselves are of 2,000 tonnes, 700 tonnes and 300 tonnes capacity, altogether some 104 silos with a total capacity of 125,000 tonnes

As for truck loading – approximately 200tph, with 8-9 trucks per hour being loaded.

8.2.1 Discharge Procedure

The procedure for checking and unloading cargoes is:

- i. The ship docks
- ii. Samples are taken by for testing
 1. Ministry of Agriculture (who first perform a visual inspection of the cargo)
 2. Beirut Silos themselvesIf these are clean/meet spec then:
- iii. If the load is to be discharged to storage in the silos then discharge may proceed
- iv. If the load is to be discharged to lorries for onward dispatch to the mill then
 1. Customs, in co-operation with Min Agriculture officials approve the cargo and issue appropriate documentation – the cargo then may be discharged
- v. Discharge
 1. The cargo is unloaded through pneumatic unloaders twin sets of three tubes, each tube with grill filter to guard against metal and other large objects (see below).
 2. The grain is then conveyed to a horizontal conveyor that takes it to the silos. A further sample is taken from this conveyed wheat for internal analysis with the sample from the hold.
 3. The load is then distributed to the allocated silo (or 'cell').
- vi. It is noted that each ship load is uniquely identified, weighed and characterised; written notification of this is transmitted to the mill
- vii. On discharge from the silos a customs certificate has to be obtained prior to loading the mills lorries.

Records of the ships that are discharged are maintained; an example of this is at the Addendum to Appendix F. These records include the date of docking, the name of the vessel, tonnage, manifest quantity, quantity unloaded, storage, costs and the name of the mill for which the wheat is destined amongst other administrative data.

8.2.2 Quality control

Beirut Silos maintains a quality control laboratory for their own use. The QC department has recently been upgraded with equipment and service personnel. The procedural system is set out below.

1. Samples are taken from the hold of a newly arrived vessel , and a similarly sized sample from the horizontal conveyor. These samples are mixed and used for testing. Tests are for specific gravity, temperature and humidity.
2. Samples are retained for:
 - i. 2Kg for the duration of the storage of the cargo
 - ii. 250g bags for 2 years of each cargo

8.2.3 Modernisation, refurbishment and operating procedures

The company is undergoing refurbishment (false ceilings pulled out, cleaning) establishment of new warehousing space for spare parts, etc. However, there are significant problems because of the age of the machinery, and the control systems the company has to seek spares or have parts made which are no longer available from the original manufacturer – e.g., recently a silo complex in Aqaba (Jordan) offered spares for the Siemens manufactured control systems (see below) as the Jordanian complex was modernising – the Beirut Silos have not the funds to do so.



8.2.3.1 Pneumatic Unloader

The company is considering the purchase of a mobile pneumatic unloader to allow it to unload from a neighbouring wharf, to which the company has access.

8.2.4 Personnel

The company is instituting new practices to improve health and safety – clothing, masks, protective boots, helmets and the like, although take up currently appears low.

8.2.5 Fees

Beirut Silos, as well as unloading vessels and providing temporary storage prior to onward transmission of cargo also provides long-term storage and stock management services. An example of the fee and insurance structure is to be found at Addendum 2 to Appendix F. An outline of fee structure is given below.

1. Port fees - \$1.5/tonne
2. Unloading fees
 - To silo
 - Direct to lorry
3. Insurance and storage (see separate sheets)
4. Overtime (2.30 p.m. – 07.30)
5. Disinfection (if required)
6. Fumigation (if required)
7. Silo management (when required)
8. Number of days in store; the unit cost increases the longer the grain is held by the Silos

8.2.6 Issues with Beirut Silos

There are a number of reported issues with Beirut Silos, though some do appear to be legacy complaints. However, those reported to the research team are recorded below.

8.2.6.1 Discharge of wheat

1. Many of the mills have issues with a government decision²¹ that requires them to use the pneumatic system at Beirut Silos – and not the private company at the adjoining pier that is equipped with clamshell unloading grabs. It is held by GDCS that this is cleaner and more efficient; however, some local mills believe this deprives them of choice, and increases their import costs; others maintain it costs the same but they lose the flexibility offered by clamshell unloading. It is believed that one, or more, of the mills have private holdings in the company offering clamshell discharge facilities.
2. Concerns have been expressed over cross contamination, and mixing of batches of different cargoes. These are rebuffed by Beirut Silos management.

8.2.6.2 Vessel access to Piers

Companies have complained about access to piers:

- Increase in waiting times for piers increasing demurrage and costs
- Sequencing of vessels for discharge. It is acknowledged that favouritism used to occur but this practice has now ceased
 - o Vessels discharged over 2.30 p.m. and at weekends are subject to overtime rates

8.2.6.3 Customs

One comment of note – which sublimates from the above is that Customs services are not available at weekends – thus causing the mill to incur additional charges. This is

²¹ Council of Minister decision No. 10 of 2nd November 2017 in the interests of food safety

rebutted by Beirut Silos who state that they are available, and Customs fees are payable during the weekend, discharge fees and loading (to lorries) are at overtime rates however, 'clients must request and pay custom fees on Friday if they would like to work on Sat & Sun.'

8.2.6.4 Contamination/Infestation

Many general remarks about contamination of the Silos with remains and infestations with weevils, however it is conceded by all respondents that overall cleanliness has significantly improved in the new administrative period.

8.2.6.5 Long-term storage

A number of the mills are reliant on the storage facilities of the Silos for their day-to-day storage and increasingly complain about the high cost of storage, which adds significantly to the cost of milling.

8.3 Truck Wash Down

According to the ordinance all trucks receiving wheat for onward shipment to the mills must be washed down once a day. The process comprises the following and takes approximately 10 minutes:

- a. High pressure water jet wash
- b. Steam cleaning
- c. Blasting with compressed air

The cleaning is charged at 20,000 LL, and each lorry must be cleaned every 24 hours, prior to receiving its first load. The vehicle may then take as many loads as available within the day.

The company operating the wash-down is not associated with Beirut Silos and no fees or payments accrue to that organisation.

Recent communications have suggested that the truck companies are willing to dedicate part of their fleets (there are only two companies that operate the Silo – mill trade) to wheat transport and obviate the need for the truck cleansing. This has not been formally confirmed to the Ministry.

9.0 Ministries – Interventions and Responsibilities

9.1 Introduction

There are a number of Ministries that are involved in the regulation and management of the milling and baking industry within Lebanon. The usual complaint of all respondents to the survey and the completion of this report is that there should be more co-ordination between the Ministries and less apparent duplication. There have also been reports of Ministry personnel visiting factories without the factory being aware that the Ministry has a duty, a particular example being the Ministry of Agriculture's role in the protection of standards in food production. The paragraphs below set out the legal duties and responsibilities of each of the Ministries and their departments.

9.2 Port Authorities and Customs

Of the two ports in Lebanon, Beirut and Tripoli the GDCS has oversight of the operations in Beirut of Beirut Silos. GDCS does not have any responsibilities for any of the operations of Tripoli port.

These encompass the following operations:

- Initial inspection of cargo
- Discharge of cargo
- Co-ordination with Customs
- Record keeping
- Batch management
- Storage
- Quality Assurance of cargo
- Pest and contamination control
- Onward transit of cargo to mills

Under a previous management regime the operations of Beirut Silos came in for a great deal of criticism from both severally the health authorities, the ministry of Economy and Trade, and their principal client the Mills. These complaints concerned infestations, lack of batch control and general deterioration of the silos and storage conditions in general. These issues have been and continue to be addressed, with for example, a new quality control laboratory system in place, batch management records kept as noted in the section on the Silos.

Additionally it should be recorded that there is a requirement that the mills use the pneumatic unloading and storage facilities of the Silos, rather than the clam discharge available at adjoining piers. This has resulted in unhappiness where there are owner interests in those facilities prior to the government ordinance coming into effect.

In the location of Beirut silos are also the truck cleaning facilities required by the government to be used for any vehicle transporting wheat. This causes great dissatisfaction amongst the mill owners who see it as an unnecessary burden and cost to their businesses

9.3 Ministry of Agriculture

The Ministry of Agriculture is responsible for the inspection of the wheat cargoes as they arrive, prior to discharge in the ports.

A second responsibility is the inspection of food manufacturing plant under Decree Law No 5246 dated 20/6/1994, §105.

9.4 Ministry of Economy and Trade

The MoET has two sections with responsibilities in the milling and baking sector; these are the Consumer Protection Department and the General Directorate of Cereals and Sugarbeet. Respectively the Consumer Protection Department has responsibilities and powers as follows:

- Perform random daily bread inspections
- Conduct routine market inspections
- Run a complaints department which has a duty to respond and investigate consumer complaints

The General Directorate for Cereals and Sugarbeet (GDSC) has the following roles and responsibilities within the sector, emanating from its establishment under Legislative Decree n.143/59, namely²²

- 'fixing the supply situation of the bread commodity on basis that ensure safety and good quality
- 'working on the production of Cereals and sugarbeets and ensuring marketing at subsidized prices without causing harm to the consumer.'

Subsequent Decrees and Decisions have modified its activities overall and now GDSC's role includes:

- Random inspection of the mills to ensure general operational suitability for the production to include cleanliness hygiene
- Instructing IRI²³ (lab testing services – see below) to investigate any possible contamination
- Assigning IRI on a weekly basis to test flour output for humidity, ash and acidity
- Assigning IRI on a biweekly basis to perform microbiological tests on flour samples for aflatoxins, coliforms, salmonella, E.coli (paid for by the company at LL 425,000 per test)
- Receiving monthly T85 flour delivery reports to the bakeries – for onward communication to the NSSF
- Oversight of Beirut Silos

9.5 Ministry of Public Health

Overall the Ministry of Public Health (also locally abbreviated to ministry of health) is responsible in the context of food safety; which includes environment, food, cleanliness, contamination, infestation, rodent issues etc.

Specifically in relationship to the bakers and the mills the MoPH specifies that each member of staff in direct contact with food production must undergo a medical; with the following conditions applying:

- every 3 months, medical test comprising
 - o blood test
 - o chest X-ray;
- USD 50.00 per employee, per examination

²² Translation and language as appears on the transcript on GD website

²³ Industrial Research Institute, a department of the Ministry of Industry

- To be conducted in a government hospital

Industry complains that, notwithstanding agreeing with the principal of regular health checks the insistence on attendance at a government hospital where there are many licensed local clinics available which would reduce travel, expense, and enforced absence from the workplace

9.6 Ministry of Industry

The Ministry of Industry (MoI) licenses the operations of companies within Lebanon. This constitutes issuing an initial operating licence and then an annual renewal. In addition IRI notes above comes within the establishment of the MoI. As noted above the IRI performs the weekly and biweekly tests on behalf of the GDCS.

9.7 Ministry of Finance

In general the involvement with the industry sector is as for any other – collection of annual returns, taxation etc. However in one area recent changes in operating practice has been brought to the attention of the research team. This is that VAT is being collected in the quarterly cycle, but repayments have become annual. This impacts cash-flow significantly and the (bakeries) companies would like it returned to the previous quarterly practice allowing quarterly offsets. This does not affect the manufacture and trading of Lebanese Bread.

9.8 Ministry of Labour

Two areas that have arisen as a result of the study are the duties of the Ministry of Labour (MoL) in two capacities – work permits for foreign workers, and secondly responsibilities for health and Safety in the workplace.

9.8.1 Work Permits

Work permits for foreign workers are currently charged at LL 200,000 ea., although it appears that in some instances the permit fee varies, e.g., Egyptian workers the fee is USD 10.00 ea, for Syrian, if agreed by the Ministry USD 200.00; however, in the construction and agricultural industries it would seem that no fee is payable.

This was put to the Minister (Econ & Trade) 5th March 2019 and he is to take this forward.

9.8.2 Health and Safety

On the matter of health and Safety the Ministry has the duty to

- Respond to complaints
- Randomly inspect premises

During the research no respondents reported inspections having taken place.

9.9 Municipalities

Local municipalities under Lebanese Law have the right to inspect and perform all the tests as within the powers granted to the Ministries. In the course of this study it is unknown how often this power is exercised.

10.0 Infrastructure

The two areas covered in this section are electricity and water. Both of these can be subject to erratic local supply, with customers making their own arrangements, e.g., with their own generators, or part of communal sharing schemes, and for water, artesian wells, or water deliveries.

10.1 Electricity

The Mills based in Beirut, itself and the eastern borders of the city environs of Beirut River and Karantina rely on Electricité du Liban (EDL); all other mills and the large bakers rely on a mixture and depending on location to a greater extent their own generator supply. The small bakers rely on local supply and communal generators.

Two further electricity management devices are in use, or being considered, uninterruptible power supplies (UPS) and solar arrays. UPS systems are more in favour with the bakers, as this protects the oven and conveyors from damage from a power failure; a solar array has been installed by one mill and is under consideration by another. These are expensive, i.e., capital intensive, and therefore not available to everyone, but they do defray the cost electricity.

A complete schedule of the electricity tariff is given in Appendix I. This was provided by a private company²⁴ as a 'service to Lebanese customers' in 2012. It is believed that this is still extant, albeit with timing modifications.

The two tariffs that affect the sectors are the low tension tariff for 'industry , craftsmen, agriculture, water treatment and pumping stations'. This provides for a uniform tariff of LL 115 per kWh. The second tariff, that concerns this report, is the Industrial tariff which is set out in Table 10.1 below. This has been modified with the addition of a third seasonal tariff rate as personally communicated.

Table 10.1 Electricité du Liban electricity tariffs – Industrial – April 2019

Rate	Summer Season April 1 st – Sep 30 th		October		Winter Season Nov 1 st Mar 31 st	
	Timing	LL	Timing	LL	Timing	LL
Night	00.00 – 08.00	80	00.00-08.00	80	00.00-07.00	80
Day	08.00-19.30	112	08.00-17.30	112	07.00-16.30	112
Peak	19.30-22.30	320	17.30-21.30	320	16.30-20.30	320
Day	22.30-24.00	112	21.30-24.00	112	20.30-23.00	112
Night					23.00-24.00	80

10.1.1 Regularity of supply

None of Lebanon receives a continuous power supply, and indeed, never has. However there are significant differences in the different areas; Beirut receives the most, being without mains – usually, for only 3 hours per day. However in the eastern outskirts, of Dora, for example the power is 4 hours on, 4 hours off, requiring significant reliance on generators for milling. This adds significant cost to the milling process; one company reported a study, on their own plant, with grid USD 6.3/tonne (wheat) for grid, USD 12.00 for generators, and up to USD 21.00 a tonne. In the Southern areas of Beirut – Burj al Brajneh, for example the

²⁴ Dynamic Energy & Water Solutions – www.dynamic-ews.com 2012

availability is 3 hours on – 3 off. In other areas, Bchamoun, for example, the power supply is reported as intermittent with periods of 10-15 hours off grid as common, and occasionally up to 3 days. Conversely power can arrive for 15 minute bursts! This all requires reliance on their own supply. In Tripoli the mill requires generators 10 hours a day.

For the bakers interruption in baking of the Lebanese bread can cause loss of product – when the conveyors stop the bread can rise too much (over leavened) or be burnt whilst stationary in a hot – but off – oven. One baker reports losing 120 – 180Kg of bread if change over between mains and generators say, goes wrong. Additionally if power is not restored to the system the conveyor, stationery in the oven can suffer severe distortion, and need to be replaced.

10.1.2 Local Generation

Most of the communal areas throughout Lebanon have power sharing schemes established by local entrepreneurs – now frequently imbued in local cartels. An oversight regime has been established by the Government which ensures the equitable pricing of electricity, restricting the maximum rates that can be exacted. Thus for Mechanical Habr – a typical example of a small local corner bakery in the less well-off areas of Beirut the price has been capped at USD 800 pcm, down from USD 2,200.

10.2 Water

10.2.1 Water requirements

Water is an essential component of all manufacturing processes, especially in the food industry, where more than one purity of water may be sought, for example:

- Water for washing down
- Water for food processing
- Potable water
- Very clean water (especially in 'hard water' areas) that has to go through boilers.

The main sources of water in Lebanon are:

- River water
 - E.g., the Litani River, which is highly polluted
 - Dammed rivers
- Ground water
 - Natural springs, e.g., Jeita spring, contaminated
 - Artesian wells
- Municipal Supply

In practice the municipal supply appears reasonably regular in Beirut, however externally, where supply also relies on electricity for pumping, alternate sources of mainly ground water are used.

It should be noted that all mills and bakers treat their water supply before use;

Municipal supplies are delivered by utility companies (see below), but a lot of companies maintain their own artesian wells. Two key aspects to these: in much of the country the

wells are now brackish from over extraction over the years, and secondly there is a licence fee to pay, but most wells have been drilled/dug in a period where enforcement has been non-existent

10.2.2 Water Utility Companies and Tariffs

The country is split into four administrative areas, being North, Bekaa, South and, Beirut and Mount Lebanon. The Tripoli Water Company is quoted as an example below.

10.2.2.1 North – Tripoli Water Company

The mills and bakeries are serviced on an industrial tariff which operates from a base charge for 3 m³ of water a day at a cost of LL 1200. Billing is quarterly (every 3 months) thus for approximately 30 m³ a month, the bill would be:

$90 \times 3 = 270 \times 1,200 = 324,000 + 11\% \text{ VAT} = 359,600 + \text{stamp tax of LL 250 (rounded to LL 300)}$
Thus the total bill will be LL 359,900

Note: most of the (small) bakeries don't use more than 3 m³/day to warrant paying commercial rates, and consequently pay at the domestic rate.

11.0 Pricing, Intervention and Policy

11.1 Introduction

As noted in the previous sections the main purpose of the study and this report is to evaluate the current policies and mechanisms of bread pricing within Lebanon. A Lebanese bread pricing policy has been formally managed by the GDCS since its inception in 1959. This chapter will look at the current pricing policy and the interventions muted or enacted, and summarise where available historical pricing.

The potential and actual interventions in the sector may be enumerated as:

- Imported wheat price management
- Fixing of the flour price
- Protection of the millers through tariff imposition on flour imports
- Fixing of the bread price

In addition to its role as a regulator, and a monitoring agency (as set out in Chapter 9) the Ministry is also required to ensure that the mills retain a stock of 3 months of wheat as a strategic reserve.

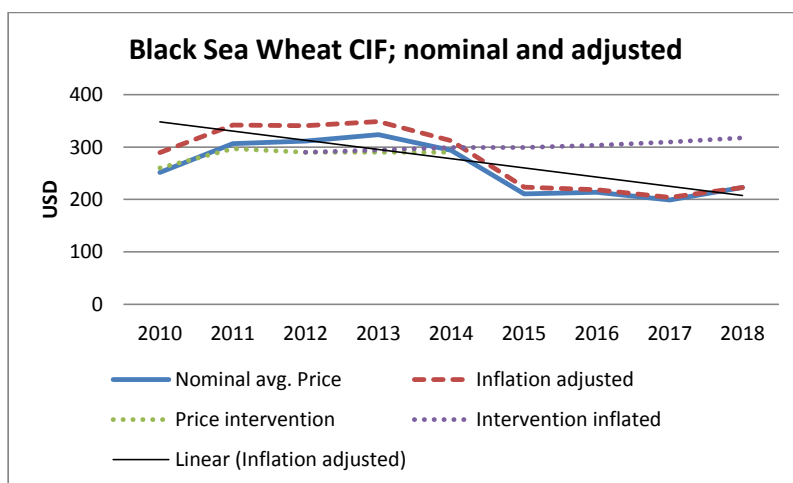
11.2 Wheat price

As discussed in section 4.4 a Ministry of Finance¹² report describes the wheat purchase interventions scheme in the years 2010 and 2011; these prices are relayed in Table 11.2 below; subsequently hearsay has suggested that a price of USD 290.00 was set by the Ministry of Trade, evidence is being sought to support this. Notwithstanding this, it is suggested that if the Government is to intervene on a dollar parity basis accounting for inflation, the minimum intervention price should be USD 317.00. However it is believed that there is no current political will for intervention.

Table 11.2 (from 4.4) USD Intervention prices at which the Government purchased wheat

Decision No	Date	USD/tonne
33	20 Oct 2010	260
2	2 Feb 2011	310
3	11 Feb 2011	297
?	Dec 2012	290
?	June 2014	290

Chart 11.2 Black Sea wheat, cif Bierut, nominal and adjusted with intervention prices (unadjusted).



11.3 Tariffs on flour imports

An import tariff on all flour imports as a protection for small and vulnerable mills has been requested by the sector. This report proposes that rather than an open-ended tariff protection scheme the government should seek sector development as a *quid pro quo* for the protection – this development should involve, where necessary:

- Modernisation
- Development
 - Product lines
 - Import substitution
- Training
- Export drive

And in turn the Government should be seeking mechanisms to resolve the cash-flow crisis, in conjunction with the sector to:

- Relieve the bank credit block
- Control invoice payment delays
- Introduce
 - Standard forms of contract
 - Standards terms of trade

11.4 Bread price

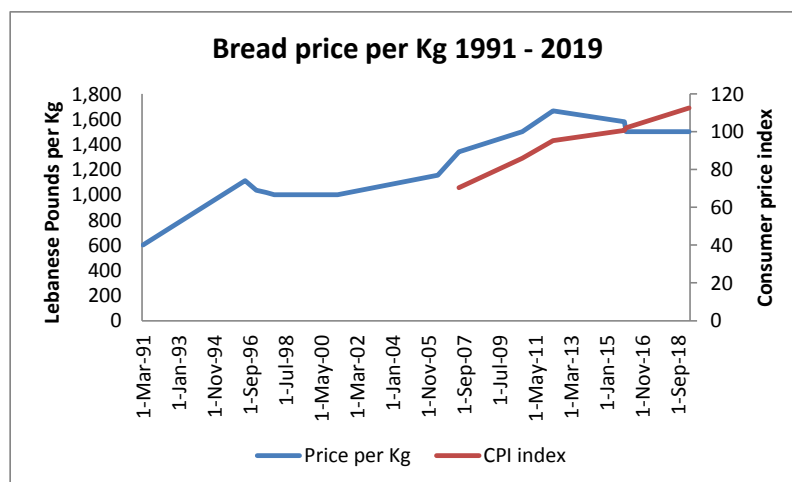
The bread price is set by a decision of the Minister of Economy and Trade on the recommendation of the DGCS, and this is fixed at the point of sale. As noted previously there are no identified central records for the price setting decisions, however, over the

period of this research the following data were found for bread prices and compiled into Table 11.5, and graphed in Graph 11.5 against the Consumer Price Index²⁵.

Table 11.4. Bread pricing decisions (known) of the MoET 1991-2016

Decision No	Date	Weight of pack	Price
16	12 March 1991	1500g	900 LL
97	6 June 1996	1350g	1500 LL
7	23 Jan 1997	1450g	1500 LL
197	31 July 1997	1475g	1500 LL
244	8 Dec 1997	1500g	1500 LL
64	20 Mar 2001	1500g	1500 LL
		1000g	1000 LL
147	17 May 2006	1300g	1500 LL
123	6 Jun 2007	1120g	1500 LL
159	18 Sep 2010	1000g	1500 LL
56	25 April 2012	900g	1500 LL
3	10 Dec 2015	950g	1500 LL
5	27 Jan 2016	1000g	1500 LL

Graph 11.4 Bread price from 1991 – 2019 against CPI 2007 - 2019



It can be seen from the graph that the bread price mirrored the increase in the consumer price index until April 2012, where the increases were below the CPI rate, and thereafter from January 2016 the price has been constant at LL 1500 per Kg of bread.

11.6 Historical Financial Models

The GDSCS has inherited legacy models for the pricing of milling in the mill sector and for baking of bread for the bakers; these respectively were prepared by the Millers' Union to defend an intervention price for the government purchase of wheat, prepared in 2013, and a model for the cost of baking, prepared by a consultant to the GDSCS in 2011.

²⁵ Central Administration of Statistics, food and non-alcoholic beverages component of the consumer price index. December 2007 – current. Note index 100 is December 2013.

These were prepared, and a new model being developed, to ensure that the price of (Lebanese) bread in the Lebanese retail market is stable and consistent throughout the country, and provides a margin to both the miller and the baker. The original models are now redundant and through the courtesy of the respondents in the respective sectors the GDCS has financial information that allows the development of the new model on a fair and equitable basis.

11.7 2015 Costing Committee

In 2014 a committee was established comprising members from GDCS, Consumer protection, Ministry of Industry, Ministry of Finance and the IRI. The committee was charged with establishing a milling cost for flour. The outcome of this committee was discounted.

12.0 Conclusions and Recommendations

12.1 Conclusions

The following paragraphs briefly describe the conclusions and the recommendations set out throughout this report.

12.2 Capacity in the Milling Sector

The milling sector has a significant over capacity for solely supplying the domestic needs of the country for flour. It currently stands at about twice current domestic demand, but will increase as new mills come on-stream. There are pressures on the sector arising from this over capacity; both intra-sector and extra-sector. The first is the pressure on the small mills arising out of being financially squeezed, which might in itself lead to their failure; the development and coming on-stream of the new mills – which might lead them to becoming suppliers of choice as they have no debit record with the bakers – and they are likely to be fitted with up to date milling, safety and food handling equipment and thus be readier to obtain certifications and meet appropriate regulations.

It is recommended that the Ministry of Industry should confer with the GDCS before any further licences are granted.

12.3 Credit and Currency squeeze

The sector, in common with the rest of the domestic commercial market, is suffering severely from a serious credit squeeze which is having several immediate effects:

- Cash flow problems that are affecting small mills significantly more than the larger ones
- A lack of funds being made available for the modernisation/development of the mills
- A lack of dollar availability for the purchase of wheat imports

Each of these has a slightly different cause, but all maybe related to the Central Bank (Banque du Liban, BdL) maintaining high interest rates, encouraging bakers particularly to hold cash rather than pay bills, and thus making the millers bear the cost of credit.

There are a variety of mechanisms that are available to a government to facilitate the settling of invoices; for example, as has been enacted under English Law, the facility to charge interest on late payments at a rate set by the Government thus nullifying the advantage of depositing monies with the bank rather than settling invoices due.

The Government should take a firmer line with the banks as the purchase of wheat for milling and satisfying the bread needs of the population counts as one of national security and should be prioritised over the profits of the commercial banks.

12.4 Interventions with the milling and baking sectors

The different interventions in the sector are discussed in several sections of the report, but in summary the four areas where, apart from a supervisory or regulatory role, the Ministry has, or may play a part are:

- Price of wheat
- Imposing protective tariffs on imported flour
- By extension – the fixing of the bread price

Additionally the Government imposes a stock holding requirement in case of national emergency on the millers. All of these are discussed in some detail in respectively Chapter 4 and Chapter 11.

From the findings of this report, with regard to domestic production it seems that there is little need for intervention in the wheat price; overall there is a need to maintain the bread price at an affordable level, however notwithstanding pressure from the industry there is no immediate need for it to be revised.

Again from the findings of this report a new financial model which will inform the pricing of bread is being developed as a long-term tool for the General Directorate of Cereals and Sugarbeet.

12.4.1 Protective tariffs

Tariff protection for the mills against imported T85/T75 flour is sought by the Millers' Union, however vulnerabilities of the sector are not limited to the imports, as noted above the interest rates demanded by the commercial banks have a significant impact.

The other vulnerability for the smaller mills is the increase in sector capacity offered by the coming on stream of the two new mills, providing it is assumed modern efficient production facilities. There is ample excess capacity in the sector to absorb

This report recommends that if the tariff is to protect the sector it will become permanent unless a *quid pro quo* is sought from the Union. A better offer would be for a term, renewable tariff regime, with the aim of protecting the mills long enough to upgrade/modernise assist them to achieve certification, or to compile a complete status report and help to resolve their cash flow issues.

Additionally the Ministry should seek to reduce the credit block, without which they, and other, mills cannot achieve the funds they need to modernise, or carry out remedial works. In concert with this the Ministry should use its influence to reduce the misuse of trading terms, and it should be suggested that the Union introduce a standard form of contract and terms of business to be universally applied. It is suggested that this should be part of a consultation process with the Union. As the Union also seeks assistance in other areas for example training and export promotion the Union will have to accept changes in the sector to obtain the benefit of Government aid. It is also not known whether the new mills coming on stream will participate in the Union activities and consultations.

The short potential respite offered should be used to provide export assistance to the sector, and in concert the industry should research and develop its own export market

opportunities. Thus tariffs thus should act as a temporary shield and and should be used as an agent of change to induce modernisation and development.

So from tariffs, to

- Modernisation
- Development
 - o Product lines
 - o Import substitution
- Training
- Export Drive
- Resolve cash-flow issues (with government assistance)
 - o Relieve the bank credit block
 - o Control invoice payments
 - o Standard forms of contract
 - o Standardise terms of trade

12.5 Labour, Training and Technical Skills

Training: Both millers and bakers reported a lack of technical skills from the domestic Lebanese population and stated reliance on imported specialists. They requested assistance, and thus the authors are proposing a scheme with private sector development and training providers.

Labour permits: Reported by both millers and bakers are the disparities in employment permits for foreign labour. This should be addressed, simplified, codified and given uniformity.

Health checks for food industry workers: all workers should be allowed to obtain certificates from local licensed facilities.

12.6 Other Areas of Assistance

In addition we have noted, and passed on the following:

12.6.1 Low Protein Wheat

The decision by the Ministry of Agriculture to restrict the purchase of low protein wheat to animal feed should be rescinded.

12.6.2 Taxation System of Mills

The form of taxation of mills should be changed to reflect their margins vis-à-vis their turnover.

12.6.3 Financial Assistance

The mills are seeking some form of financial assistance to defray the cost of modernisation and development.