

DAIRY PROCESSING

IN-DEPTH REVIEW OF STRATEGIC TRADE SECTORS IN UKRAINE

USAID COMPETITIVE ECONOMY PROGRAM IN UKRAINE (USAID CEP)

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USAID Competitive Economy Program in Ukraine (USAID CEP) promotes a strong, diverse, and open economy of Ukraine by enhancing the business environment for small and medium enterprises (SMEs), improving competitiveness in promising industries, and enabling Ukrainian companies to benefit from international trade.

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List of abbreviations

AVE	ad valorem equivalent
CAGR	compound annual growth rate
HACCP	Hazard Analysis and Critical Control Point
HoReCa	hospitality, restaurant, café/catering
GVA	gross value added
NTMs	non-tariff measures
PE	private entrepreneur (short for physical person – entrepreneur)
SME	small and medium sized enterprises
UAH	Ukrainian hryvnia
USD	United States dollar

I. Sectoral Impact Assessment in Dairy Processing

Executive Summary

The dairy sector contributes about 0.4% to the GVA, with over half of which generated by the SMEs. The sector has been attractive to foreign investors: Danone S.A., PepsiCo, Lactalis, The Bel Group, and Savencia Fromage & Dairy, having manufacturing facilities in the country.

The main challenges faced by the sector is the shortage of raw milk as the cattle headcount has been steadily declining, counterfeit products, and product quality. The latter has been gradually improving over the last several years as Ukraine has progressed in the food safety system reform, including the full-scale implementation of the HACCP and new milk quality regulations.

Dairy processing companies expect the FTA with Turkey to reduce high import tariffs in Turkey and stimulate exports. At the same time, they are afraid of increased domestic competition. Recently, the opening of the Ukrainian market for EU products resulted in the growing imports that bother local manufacturers.

The modeling results confirm that deep liberalization FTA entailing the elimination of extremely high import duties on dairy products will boost both exports and domestic production of the sector significantly.

Summary table

Indicator	Value	Year of observation
Value added, % of GVA	0.4	2018
SMEs value added, % of sector total	64%	2018
Real output growth, % CAGR, 2018	-10.8%	2018
Hired employees, thous.	51	2018
Average monthly wage, UAH	6 969	2018
Exports, USD bn	0.31	2018
Exports, % of domestic production	17	2017
Imports, USD bn	0.10	2018
Imports, % of domestic absorption	4	2017
Ukraine RCA, world	1.43	2018
Ukraine RCA, Turkey	10.07	2018

Sources: Ukrstat, WITS, authors' estimates

1. The general situation in the dairy processing sector

1.1. Domestic production

Value-added. The dairy processing sector accounts for 0.4% of Ukraine's GVA, and this share has not changed over the studied period (see Table 1). The sector has been providing income for many small and medium-sized businesses in Ukraine. The SMEs make up 699 out of 709 companies in the dairy processing sector, thus accounting for almost 99% of the total.[1] Their share in the sector in terms of value-added has been steadily rising from 2013 to 2017 but dropped somewhat in 2018.

There is also a substantial number of private entrepreneurs (PEs) in the sector, but they produce a tiny share of the value-added (0.7%). The difference between the high quantity of PEs and their comparatively low contribution of the value-added may indicate that a part of the value-added produced by those businesses is not reflected in the national statistics.

Table 1: Value added in the dairy sector*, 2013 – 2018

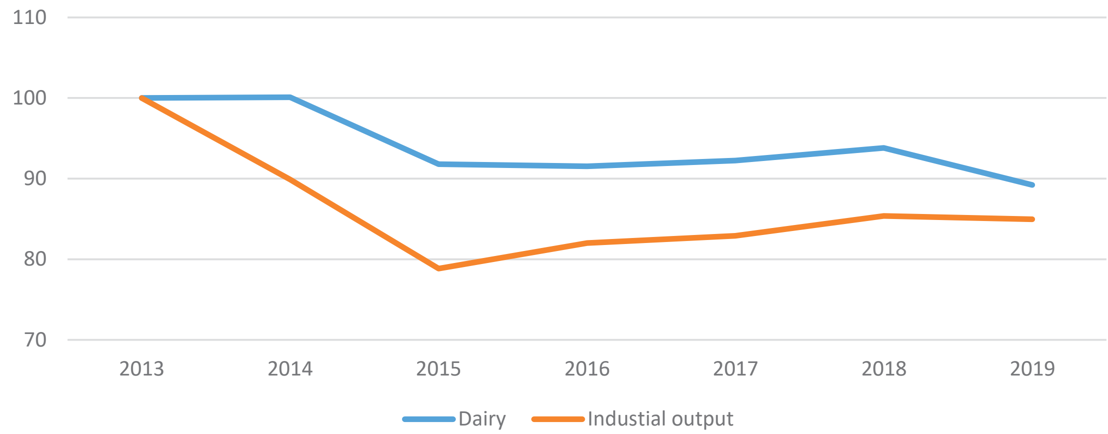
	2013	2014	2015	2016	2017	2018
Value added, UAH bn	5.3	6.0	5.7	7.6	10.5	12.1
Value added, % of output	16.3%	17.9%	14.7%	17.5%	17.5%	18.3%
Value added, % of GVA	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%
Value added produced by SMEs, % of total	49%	60%	66%	76%	79%	64%
Value added produced by PE, % of total	0.7%	0.5%	0.5%	0.6%	0.6%	0.7%

Source: Ukrstat
*Note: * based on information for private companies*

Output trends. The real output of the dairy processing sector has been showing a clear downward trend since 2013 (see Figure 1). While the drop in production in this sector has been somewhat smaller than in the industry overall, it accelerated in 2019, falling to the 89% level of the 2013 benchmark.

[1] State Statistics Service of Ukraine. Number of employees in large, medium, small and micro enterprises by type of economic activity (2010-2018) http://www.ukrstat.gov.ua/operativ/operativ2018/fin/pssg/pssg_u/ksg_vsmm_ek_2010_2018_u.xlsx [Ukr.]

Figure 1: Real output trends, 2013-2018

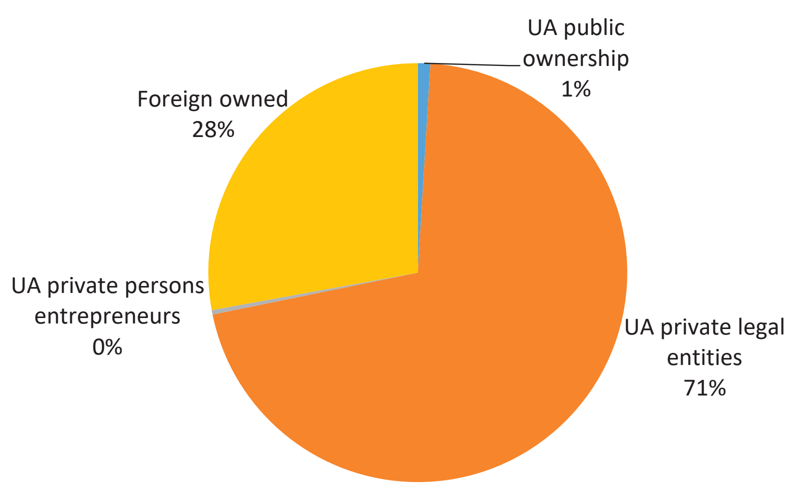


Source: Ukrstat

Ownership structure. Private legal entities dominate the sector (see Figure 2). The share of Ukraine' public companies in sales was 1% in 2018, while the share of private entrepreneurs was close to zero.

The dairy processing sector has also been attractive for foreign investment: according to our sales-based estimates, more than a fourth of all sales of dairy products on the market are made by foreign-owned companies. Danone S.A., PepsiCo, Lactalis, The Bel Group, and Savencia Fromage & Dairy are among the most prominent foreign investors in this sector in Ukraine.[2]

Figure 2: Ownership structure, 2018



Source: Ukrstat

[2] Ranking of the Biggest Dairy Processing Companies in Ukraine. https://landlord.ua/reytingi/reyting-krupneishih-pererabotchikov-moloka/ [Rus.]

Market concentration. Thanks to the significant number of SMEs in the dairy sector, the level of market concentration in the industry is moderate. According to our estimates, 21% of sales are made by the top-4 companies in the sector. The top-8 companies cover 32%. In 2017, the dairy market was one of the top three markets with the most amount of mergers and acquisitions approved by Ukraine's Antimonopoly Committee.[3]

Informal sector. The informal economy plays a vital role in the sector functioning. The World Bank 2019 Enterprise Survey shows that 62% of companies in the food sector in Ukraine say they compete against unregistered or informal firms, while 52% of food companies identify practices of competitors in the informal sector as a major constraint.[4]

A representative of one of the leading Ukrainian companies of this sector interviewed by the IER said that there is a clear division between top companies that work transparently and smaller manufacturers of dairy products that operate either semi- or unofficially. He estimated the market shares of transparent and non-transparent companies as 30:70. Another dairy processing company claimed the percentage of unreported output in the sector is 20%, and the share of the unreported workforce is 30%. In a recent interview published by an agrifood news outlet in Ukraine, a representative of a business association in the dairy sector estimated unreported cash as 20% of income in this sector.[5]

Informal operation of businesses does not just shrink the tax base in the dairy sector. It also brings safety hazards. According to respondents, small dairy manufacturers do not have sufficient infrastructure to ensure the safety of their products properly.

1.2. Employment

Dairy processing sector as an employer. The number of employees working in the dairy processing sector has decreased since 2013. Still, their share in the total number of employees in Ukraine has not changed, which indicates that the sector is similar to the national economy in terms of reducing the workforce (see Table 2). The share of employees in the dairy processing sector working in SMEs has increased significantly since 2014 that also corresponds to the increase of the SMEs role in the sector's value-added.

Table 2: Employment in the dairy sector*, 2013 – 2018

	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Number of hired employees in the sector, thous.	63.3	55.9	50.7	49.5	51.3	51.0

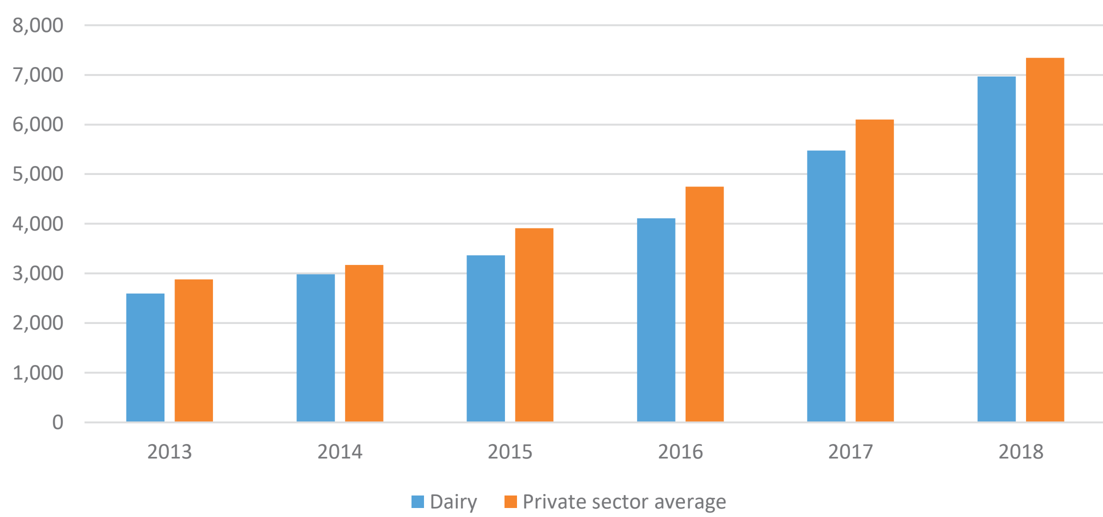
[3] Analytical agency INFAGRO. The Dairy Market is Among the Three Main Ones with the Highest Number of Concentrations in 2017 https://infagro.com.ua/ua/2018/06/25/molochniy-rinok-u-top-3-osnovnih-rinkiv-de-vidbuvalosya-naybilshe-kontsentratsiy-u-2017-rotsi/ [Ukr.]
[4] The World Bank. Enterprise Surveys – Informality. Ukraine https://www.enterprisesurveys.org/en/data/exploreeconomies/2019/ukraine#informality
[5] Vadym Chagarovsky: One Large Dairy Processing Enterprise Disappears in Ukraine Every Year https://agropolit.com/interview/748-vadim-chagarovskiy-schoroku-v-ukrayini-znikaye-1-velike-molokopererobne-pidpriyemstvo [Ukr.]

	2013	2014	2015	2016	2017	2018
Hired employees working in sector SMEs, %	62%	81%	80%	85%	77%	77%
Hired employees in the sector, % of total in the economy	0.7%	0.8%	0.8%	0.8%	0.8%	0.7%
Average monthly wage, UAH	2 596	2 981	3 369	4 113	5 477	6 969
Average monthly wage, USD	324.8	250.8	154.2	161.0	205.9	256.2
Real average monthly wage, index, 2013=100	100.0	100.6	76.5	82.0	95.3	109.4

Source: Ukrstat
*Note: * based on information for private companies*

Wages. Wages in the dairy processing sector are not competitive. Real pay had been decreasing over several years up to 2017, when the first upward change since 2013 was registered. The average nominal monthly wage in the sector in 2018 – under UAH 7,000 – was less than the average wage for industrial firms in Ukraine in the same year (over UAH 9,600[6]). However, the average wage in dairy processing has been growing along with overall private-sector wages in Ukraine every year since 2013, with the most significant leaps taking place in 2017 and 2018 (see Figure 3).

Figure 3: Average monthly wage, 2013-2018



Source: Ukrstat

[6] State Statistics Service of Ukraine. Average monthly wages of full-time employees by type of economic activity of industry in 2010-2019 http://www.ukrstat.gov.ua/operativ/operativ2014/gdn/prc_rik/prc_rik_u/dszpPD_u.html [Ukr.]

Labor turnover. The food sector is one of the areas with the highest personnel turnover in the Ukrainian industry. In each quarter of 2019, approximately 12% of employees stopped working in this sector. Overall, 130.9 thousand employees were hired in the food sector in 2019, and 140.2 thousand employees quit working in this sector. 94% of them resigned on their own, while others were fired due to redundancy or other reasons.[7] That suggests that personnel turnover should also be quite high in the dairy processing sector, which is a part of the food sector.

One dairy processing company interviewed by the IER estimated its turnover rate at 3% of personnel, while another company put it at 10%. The latter company estimated their turnover rate as an average one for the dairy processing sector.

1.3. Sector development assessment

Steady demand. Dairy products are an essential part of Ukrainian food retail. Taken together, milk, cheese, butter, and other dairy products made up 5% of all retail sales and 11.6% of food retail sales in Ukraine in 2018.[8]

The demand for dairy products remained at the same level over recent years despite the rise of their prices. On average, one person in Ukraine consumed 19.1 kg (42.1 lbs) of dairy products and milk per month in 2018.[9] This amount was the same in 2010, which suggests that the increased expenses and any changing consumer trends have not diminished the demand for dairy products. Therefore, the downward output trend is explained by lesser exports and also the population decline.

The higher is the income of a household, the more dairy products it consumes. Households in the lowest income quintile in Ukraine consumed on average 14.7 kg (32.4 lbs) of dairy products per month in 2018, while households in the highest income quintile consumed 24.2 kg (53.4 lbs) of dairy products.[10] That suggests that producing niche, organic, and better quality dairy products with more added value to sell to the consumers in more well-off strata may be profitable in Ukraine. Indeed, a subsector of craft dairy products, including niche fermented products like yoghurt and kefir that positioned as "healthy" and "heritage" ones, are emerging in the country.[11]

Raw milk shortage. However, the dairy processing sector in Ukraine has been facing the problem of reducing the supply of milk. Ukraine's cattle headcount, as well as the production of milk, have been in decline for several years. While Ukraine produced almost 11.5 m tons of milk in 2013, by 2018, this amount reduced to 10 m tons.[12] The number of cows decreased from 2.6 m in 2011 to 1.9 m in 2019 (an approximately 27% fall), while the number of goats

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[7] State Statistics Service of Ukraine. Movement of workforce by type of economic activity in industry for all quarters in 2019 http://www.ukrstat.gov.ua/operativ/operativ2019/gdn/rkd/rkd_prom/rkd_prom_u_19.xlsx [Ukr.]

[8] State Statistics Service of Ukraine. 2018 Statistical Yearbook http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/11/zb_yearbook_2018.pdf [Ukr.]

[9] Ibidem

[10] Ibidem

[11] Sector Selection Assessment Report. Competitive Economy Program. USAID Ukraine, 2019.

[12] State Statistics Service of Ukraine. Agriculture of Ukraine. 2018 Statistical Yearbook http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/05/zb_tu2018.pdf [Ukr.]

and sheep decreased from 1.7 m in 2011 to less than 1.3 m in 2019 (an almost 25% decline).[13] As a result, Ukrainian dairy producers have been reporting a shortage of milk.[14]

Milk quality. For a long, the quality of products has been a challenge for the dairy processing sector in Ukraine. In 2019, as a part of implementing the Association Agreement with the EU, Ukraine updated regulations of milk production and dairy processing to increase the safety and quality of dairy products for consumers and to avoid misleading consumers about the composition of these products.[15] The new regulations strengthen sanitary requirements. They specify the maximum amount of microorganisms and somatic cells in raw milk and set the criteria regarding milking equipment, milk transportation, and health and hygiene of persons responsible for milking. Besides, the new norms prohibit marking products made with non-dairy ingredients as dairy ones.

To comply with the quality assurance norms, Ukrainian dairy processing firms have to invest more in equipment and update their business processes. These steps resulted in the growth of the supply of higher quality milk in Ukraine. In 2019, the share of milk of the highest quality (extra-grade) purchased by dairy processing enterprises increased to 27% from 22% in 2018.[16] In 2020, the quality of the milk used by dairy processing companies is expected to improve even more because already in the first quarter of 2020, the share of extra-grade milk increased to 36% from 26% in the first quarter of 2019.[17] Technical assistance programs such as USAID's Agriculture and Rural Development Support (ARDS) program[18] contributed to improving the quality of milk produced by local farmers in Ukraine by building laboratories for testing milk in Ukrainian regions.

Counterfeit products. There are significant concerns in the sector regarding counterfeit dairy products. In 2018, an industry association estimated the share of counterfeit dairy products as 30% of the market.[19] Manufacturers of these products mislead consumers by swapping ingredients and adding unsafe substances without disclosing the actual composition of the products on their packaging.

The full-scale implementation of the HACCP (Hazard Analysis and Critical Control Point) system[20] could help to tackle this issue. The HACCP principles ensure that the companies

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[13] State Statistics Service of Ukraine. Animal Production of Ukraine. 2017 Statistical Yearbook http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/05/zb_tu2017pdf.pdf [Ukr.]

[14] More expensive than in Brussels: how Ukrainian dairy products lose Ukrainian market to the EU producers. Oksana Pyrozhok, Ekonomichna Pravda, 2019 https://www.epravda.com.ua/publications/2019/12/2/654311/ [Ukr.]

[15] Ministry of Agricultural Policy and Food of Ukraine. Order No. 118 On Approval of the Requirements for the Safety and Quality of Milk and Dairy Products of March 12, 2019 https://zakon.rada.gov.ua/laws/show/z0593-19 [Ukr.]

[16] State Statistics Service of Ukraine. Procurement of milk by processing enterprises in 2019 http://www.ukrstat.gov.ua/operativ/operativ2019/sg/nmpp/nmpp_2019.xls [Ukr.]

[17] State Statistics Service of Ukraine. Procurement of milk by processing enterprises in the first quarter of 2020 http://www.ukrstat.gov.ua/operativ/operativ2020/sg/nmpp/nmpp_I_2020.xls [Ukr.]

[18] Impact stories. A Dairy Revival in Ukraine https://chemonics.com/impact-story/a-dairy-revival-in-ukraine/

[19] Association of Milk Manufacturers: The growth of counterfeit dairy products reduces the profitability of dairy processing http://avm-ua.org/uk/post/avm-rist-obemu-falsifikovanoi-molocnoi-produkcii-znizue-rentabelnist-virobnictva-moloka [Ukr.]

[20] Law of Ukraine "On the Basic Principles and Requirements for Food Safety and Quality", 771/97-VR, current edition from 16.01.2020 https://zakon.rada.gov.ua/laws/show/771/97-%D0%B2%D1%80#Text [Ukr.]

follow safety guidelines in the process of food production, packaging, and distribution. It allows tracking the safety of the products at critical control points and taking corrective actions if the safety criteria are not met. This law set the deadlines for Ukrainian companies to adopt the HACCP system: 2017 for large enterprises, 2018 for medium-sized ones, and 2019 for small ones[21].

Rising prices. The prices of dairy products more than doubled in hryvnias since 2013. The consumer price index of milk was 2.58 in 2019 compared to 2013, while the index of cheese and cottage cheese was 2.38. That is almost on par with the change of the price index for food and non-alcoholic beverages and lower than the consumer price index change.[22]

Competition with imported dairy products and protectionism. The domestic producers complain about the increased import competition after the DCFTA resulted in the opening of the Ukrainian market. The Ukrainian producers complain that the EU producers receive government subsidies that are not available in Ukraine.[23] Dairy companies also mentioned smuggling dairy products across borders among the reasons why imported dairy products are cheaper for consumers.[24] A sector informant interviewed by the IER said that cheese in the EU countries is less expensive because they invested more in capital expenditures and automation.

Faced with the increased competition by imported goods on the Ukrainian dairy market, some players in the sector have been advocating for protectionist policies. An industry association has suggested introducing "mirror" quotas on dairy products imported from the EU[25] that would go against the DCFTA provisions. Companies interviewed by the IER has expressed similar expectations. Some of them suggested following the examples of Turkey as well as Belarus and setting higher import tariffs or imposing stricter safety regulations for imported dairy goods.

Impact of novel coronavirus pandemic. Farmers' markets were closed in Ukraine during the most limiting lockdown period that was in place from mid-March to the end of April 2020 due to the coronavirus pandemic. As a result, farmers could not sell raw milk directly to consumers and ended up selling it to dairy processing companies. That lowered milk procurement prices for the dairy processing sector in Ukraine.[26]

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[21] Main Department of the State Food and Consumer Service in Chernihiv oblast. What you need to know about HACCP? https://dpsscn.gov.ua/bezpechnist-kharchovykh-produktiv-ta-veterynariia/haccp/shcho-potribno-znaty-pro-haccp/1367/shcho-neobkhidno-znaty-pro-haccp.html [Ukr.]
[22] State Statistics Service of Ukraine. Consumer price indices in 2019. Statistical publication http://www.ukrstat.gov.ua/druk/publicat/kat_u/2020/zb/03/zb_ISC_2019.pdf [Ukr.]
[23] A well-known businessman sounds the alarm: prices for raw milk in Ukraine have exceeded European prices https://glavcom.ua/economics/finances/vidomiy-biznesmen-bje-na-spoloh-cini-na-molochnu-sirovinu-v-ukrajini-perevishchili-jevropeyski-616821.html [Ukr.]
[24] Why Ukrainian milk is more expensive than Polish one – Commentary by The Dairy Alliance https://trademaster.ua/news/24268 [Ukr.]
[25] Association of Dairy Manufacturers. Ukraine needs to introduce quotas on imports of dairy products – Chaharovskyi http://avm-ua.org/uk/post/ukraini-potribno-vvesti-kvoti-na-import-molokoproduktiv-cagarovskij
[26] Procurement prices for milk from the population decreased by 70 kopecks – AgroPolit.com https://agropolit.com/news/16139-zakupivelni-tsini-na-moloko-u-naselennya-znizilisya-na-70-kopiyok [Ukr.]

2. Foreign trade

2.1. Exports and imports

Dynamics of trade. Both exports and imports of dairy products declined in 2014-2015, amid the crisis, and the trade has not regained the pre-crisis level still.

Imports took a harder hit: with the Ukrainian currency rapidly depreciating in 2014 and 2015, their value in US dollars shrank significantly (see Table 3). However, imports of dairy products started recovering already in 2016 and have been rising ever since, fueled by trade liberalization with the EU and strong domestic demand.

The exports of dairy products reduced less, but their revival has also been less smooth. The Russian market Between 2013 and 2018, exports featured growth only in 2017. The major shock for the dairy exporters was the complete closure of the Russian market that absorbed about half of the Ukrainian dairy exports in 2013 but ceased to exist by 2016. The producers have been reorienting toward the Arab countries and the EU, but the process has been slow. A shortage of raw milk and quality issues also contribute to the exports' uneven performance.

Our interviews with companies in the sector show that tariffs and quality standards are critical barriers to exporting Ukrainian dairy products. In some instances, Ukraine's trade position is worse compared to other countries, according to IER's informants. They said that some states set zero or low import tariffs for the EU and Russian dairy products, while higher tariffs are applied to Ukrainian dairy goods. One company said that they are required to carry out rare radioactivity tests to export their products.

Besides, entering foreign markets is expensive, according to the interviewed businesses. A dairy company that spoke to the IER said that marketing expenses related to entering the Polish market are about EUR 1 m. Another company mentioned bureaucracy and slow reaction by public authorities to requests that would facilitate trade as a non-tariff barrier.

Table 3: Foreign trade in the dairy sector*, 2013 – 2018

	2013	2014	2015	2016	2017	2018
Value of exports, USD bn	0.55	0.37	0.21	0.19	0.33	0.32
Exports growth, % year-on-year	-	-32%	-43%	-9%	71%	-5%
Exports, % of total exports	0.9%	0.7%	0.6%	0.5%	0.8%	0.7%
Value of imports, USD bn	0.25	0.15	0.04	0.04	0.07	0.10
Imports growth, % year-on-year	-	-38%	-76%	22%	52%	42%
Imports, % of total imports	0.3%	0.3%	0.1%	0.1%	0.1%	0.2%
Trade balance, USD bn	0.30	0.22	0.18	0.15	0.26	0.22

Source: Ukrstat/WITS
*Note: * based on information for private companies*

Trade balance. With growing imports, the balance of trade in the dairy sector may reverse soon. According to a research associate of the Institute for Agrarian Economics, a government-funded research institution in Ukraine, imports of dairy products with high value-added increased in 2019 as a reaction to the lack of raw milk in Ukraine. She says that they estimated that the value of imports rose to more than USD 152 m in 2019.[27] Therefore, while Ukraine's exports of dairy products were still higher than imports in 2019, the value of imports more than doubled since 2017.

In 2020, imports of dairy products may exceed exports. Association of Dairy Manufacturers, a business association in the dairy sector in Ukraine, estimates that the value of Ukraine's exports of dairy products was USD 44.7 m in the first quarter of 2020, while the value of imports over the same period was USD 67.4 m.[28] Butter, whey, and casein are the products where exports contracted the most, according to the Association's estimates. Besides, butter, along with milk and cream, is among the products with the highest growth of imports in the first quarter of 2020. Therefore, Ukraine may become a net importer of dairy products.

Export orientation and import dependence. Despite the growing imports, so far, its role in domestic consumption has been minimal, at 4% of domestic absorption. The share of exports in the sector's output is higher – about 17% (see Table 4). The sector imports 18% of its inputs.

Table 4: Export orientation and import dependence of the dairy sector, 2017

	% of exports in domestic production	**% of imports in domestic absorption**	**% imported inputs in intermediate consumption**
Dairy Processing	17%	4%	18%

Source: Ukrstat

Key trade destinations. The FTA countries and the EU together account for more than half of Ukraine's exports of dairy products. Exports to Turkey make up 5% of all dairy exports in Ukraine, which puts Turkey among the top-10 individual countries that are major export destinations for Ukraine in this sector.

By contrast, only 1% of Ukrainian dairy imports come from Turkey: almost all imported dairy products arrive from the EU (see Figure 4). However, even though imports from Turkey are rare, it is becoming more common to find dairy products marked as "Turkish" yoghurt and ayran[29] in Ukrainian stores. They are produced by Ukrainian dairy companies following Turkish trends and recipes.[30]

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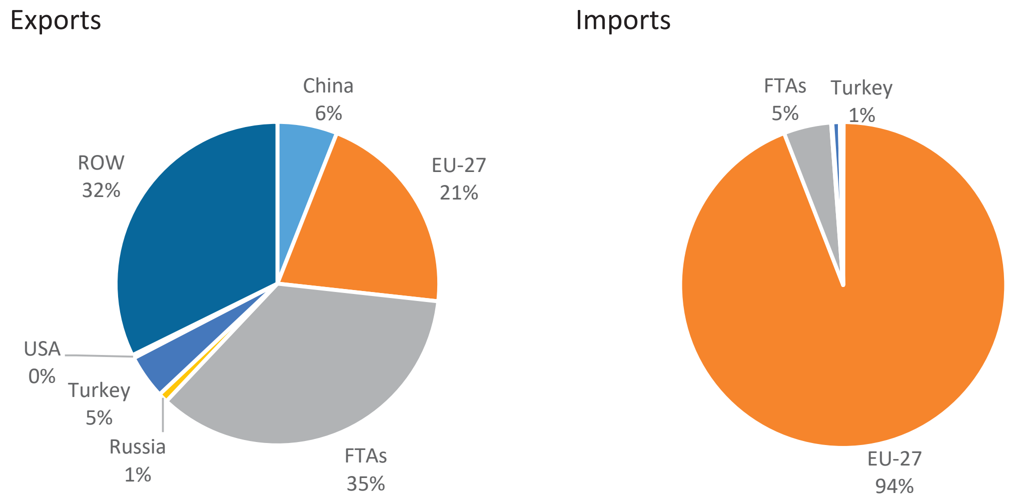
[27] Due to the shortage of raw milk in Ukraine, imports of all types of dairy products increased 1.7 times in 2019 – Olga Kozak http://www.iae.org.ua/presscentre/archnews/2730-vnaslidok-defitsytu-molochnoyi-syrovyny-v-ukrayini-import-usikh-vydiv-molochnykh-produktiv-u-2019-rotsi-zbilshyvsya-v-17-razu-olha-kozak.html [Ukr.]
[28] Association of Dairy Manufacturers. Ukraine continues to increase imports of dairy products http://avm-ua.org/uk/post/ukraina-prodovzue-narosuvati-import-molocnih-produktiv [Ukr.]
[29] Non-alcoholic drink made of yogurt, water, and salt.
[30] See interview with a representative of one of the top dairy companies for discussion of products inspired by Turkey: "We are building our business so that it is interesting for a strategic investor." Interview with the co-owner of the Dairy Alliance https://thepage.ua/ua/interview/mi-buduyemo-biznes-tak-shob-vin-buv-cikavij-dlya-strategichnogo-investora-intervyu-iz-spivvlasnikom-molochnogo-alyansu

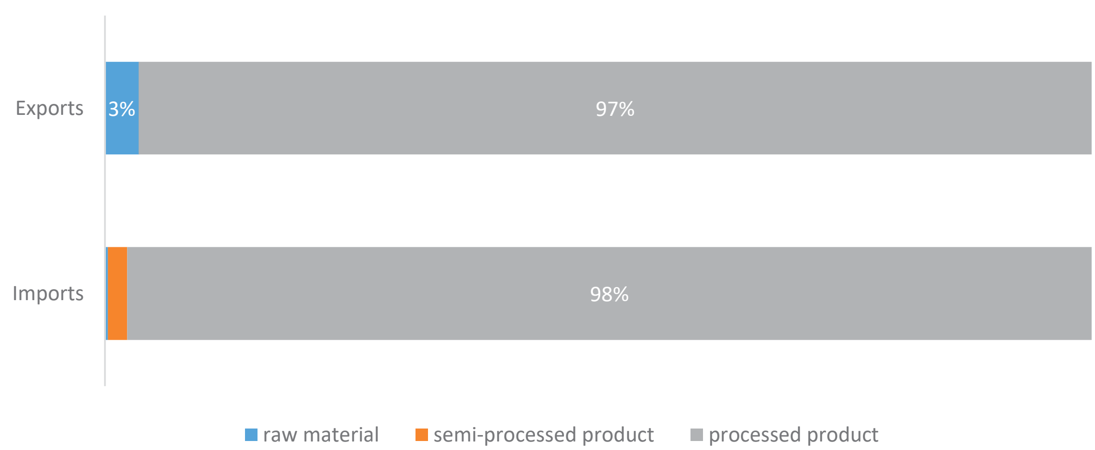
Figure 4: Key trade destinations, 2018



Source: WITS

Trade by the level of processing. In 2018, processed products constituted most of both Ukrainian exports of dairy products and Ukrainian imports of these products. Ukraine also exports a small share of raw dairy materials while importing hardly any raw materials (see Figure 5).

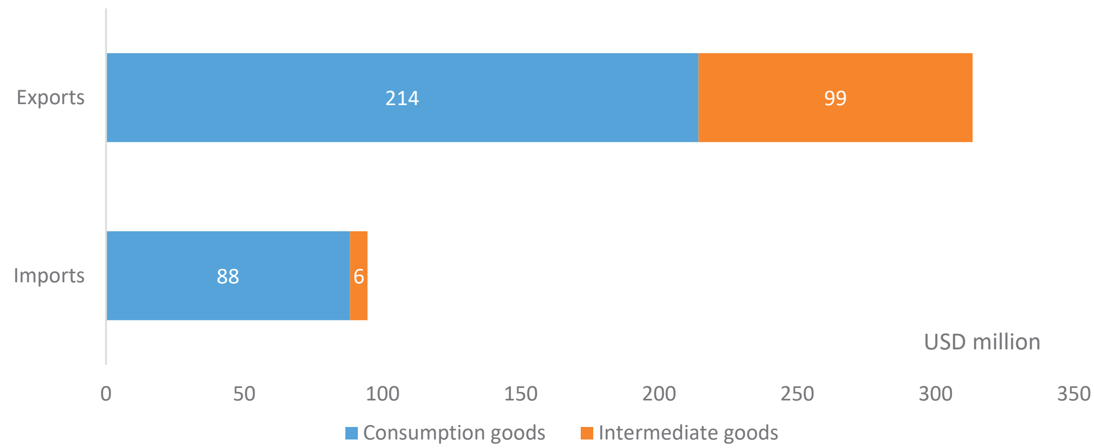
Figure 5: Trade by the level of processing, 2018



Source: WITS

Trade by end-use. Consumer products dominate in imports and account for about two-thirds of exports of dairy products in 2018 (see Figure 6).

Figure 6: Trade by the end-use, 2018



Source: WITS

2.2. Revealed comparative advantage

At the sector level, Ukraine demonstrates a revealed comparative advantage in dairy products both globally and, since recently, on the market of Turkey. At the same time, Turkey has no comparative advantage in dairy processing (see Table 5).

Table 5: Revealed Comparative Advantage on the sector level

	2013	2018
Ukraine RCA		
World	1.67	1.43
Turkey	0.00	10.07
Turkey RCA		
World	0.36	0.42
Ukraine	0.00	0.00

Sources: WITS, own estimates

The Ukrainian producers enjoy a comparative advantage for several products in dairy processing, the top-5 of which include casein, dairy spreads, butter, sweetened milk and whey. As compared to 2013, in 2018, Ukraine demonstrated a strong RCA in butter. It is linked with the recently gained recognition of the Ukrainian dairy products' safety by the EU, Turkey and several other large trade partners.

In 2018, Ukraine had a comparative advantage on the Turkish market in four products at the 6-digit level of HS, including milk and cream with 1-6% fat, butter, casein and yoghurt.

*Table 6a: Revealed Comparative Advantage of Ukraine, top-5 products**

HS 2007	Description	2013	2018
	World		
350110	Casein	5.63	16.17
040520	Dairy spreads	3.08	10.11
040510	Butter	0.88	5.76
040299	Milk & cream, concentrated (excl. in powder), sweetened	5.60	3.24
040410	Whey & modified whey, whether/not concentrated/sweetened	2.19	2.66
	Turkey		
040120	Milk & cream, not concentrated/sweetened, fat content by weight >1% but not >6%	0.00	57.31
040510	Butter	0.00	23.02
040310	Yogurt	0.00	2.93
350110	Casein	0.00	1.73

Source: WITS, own calculations
*Note: * There are only four Ukrainian products with RCA>1 on the market of Turkey in 2018*

Turkey has a very narrow set of dairy products, in which it is competitive globally (see Table 6b). That includes processed cheese, lactose syrup and whey. In 2013, Turkey was also globally competitive in ice cream, but the country lost its position by 2018. There are no Turkish products with the revealed comparative advantage on the Ukrainian market, according to the Turkish official data.

Table 6b: Revealed Comparative Advantage of Turkey

HS 2007	Description	2013	2018
	World		
040630	Processed cheese, not grated/powdered	1.91	2.13
170219	Lactose & lactose syrup, containing by weight >95% but <99% lactose, expressed as anhydrous lactose, calc. on the dry matter	1.63	1.73
040410	Whey & modified whey, whether/not concentrated/sweetened	0.87	1.00
210500	Ice cream & other edible ice, whether/not containing cocoa	1.28	0.88

Source: WITS, own calculations

3. Trade regime issues

3.1. Trade regime for exporters to Turkey

Tariff barriers applied by Turkey on dairy products are among the highest in the economy. According to our estimates, Turkey's weighted average import duties faced by Ukrainian exporters of dairy products are 176.46%, while Turkey's MFN average duty is 130%. The maximum duty applied in the sector is 180% levied on imports of different kinds of milk and cream and butter, i.e. the products supplied by Ukraine to Turkey.

Representatives of dairy companies interviewed by the IER confirmed that the high import duties constitute the barrier on exports to Turkey. One company said that they sell only monolith butter to Turkey, where it is processed and sold to consumers in smaller packaging. According to this company, Turkey is not interested in Ukrainian dairy products in retail. However, IER's informants said that there quality requirements for Ukrainian dairy products in Turkey do not constitute barriers for them.

Importing goods into Turkey is regulated by the country's Law on Veterinary Services, Phytosanitary, Food and Feed (No 5996) and Turkish Food Codex that is made up of communiqués that specify quality requirements for different types of food.[31] Among others, the Codex includes the Communiqué on raw milk and heat-treated drinking milk, the Communiqué on cheese, the Communiqué on the methods of sampling for the chemical analysis of dehydrated milk and milk powder, and other communiqués related to the dairy products.[32]

When importing food to Turkey, the importers submit the following documentation: the bill of lading (or the air waybill/the roadway bill), the commercial invoice, the packaging list, the certificate of origin, the delivery order, the insurance policy, the authorization letter to the customs administration (by the customs broker), the proof of payment, the health control certificate, the International Maritime Organization certificate, phytosanitary certificates, and import licenses.[33]

Since 1996, Turkey has been applying the same rules of origin to third countries as the EU.[34] Ukrainian Chamber of Commerce and Industry and its regional offices' issue certificates of origin. To receive a certificate of origin, a Ukrainian company must submit an application and several documents that confirm the registration of the company as an exporter and the origin of the goods in Ukraine[35]. The latter include the certificate on the process of manufacturing

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[31] Food and Agriculture Organization of the United Nations. Country presentation. Turkey http://www.fao.org/fileadmin/user_upload/codexalimentarius/CODEX50/presentation_TURKEY.pdf

[32] Republic of Turkey. Ministry of Agriculture and Forestry. General Directorate of Food and Control. Turkish Food Codex Legislation https://www.tarimorman.gov.tr/GKGM/Menus/81/Turkish-Food-CodexLegislation

[33] International Trade Centre. Commercial Imports In Turkey. A step-by-step guide for SMEs and first time importers https://euromed.macmap.org/euromed/en/market-access-info/customs-procedures-guides/download?reporter=792

[34] World Trade Organization. Trade Policy Review Body - Trade policy review - Report by the Secretariat - Turkey - Revision https://bit.ly/3dk1HC7

[35] Ukrainian Chamber of Commerce and Industry. Certification of origin https://ucci.org.ua/siertifikatsiia-pokhodzhiennia [Ukr.]

of products, information on materials from which the goods are made, information on production areas, equipment and labor, and others.

3.2. Trade regime for importers from Turkey

Compared to Turkey, Ukraine's sector protection is much lower. According to our estimates, the weighted average import duties applied by Ukraine towards Turkey in the dairy processing sector are 10%, while the MFN average is 9.4%. Most dairy products, except for ice cream, lactose and casein, face 10% MFN duty in Ukraine.

The imports of food into Ukraine are regulated by the country's Customs Code as well as several laws specifying quality requirements and state control over the imported products: the law "On Veterinary Medicine"[36], "On the Basic Principles and Requirements for Food Safety and Quality"[37], "On State Regulation of Agricultural Imports"[38], "On State Control over Compliance with the Legislation on Foodstuff, Forages, By-products of an Animal Origin, and Health and Well-being of Animals"[39], and others.

The Customs Code lists the documents required for importing goods into Ukraine, such as the customs declaration, documents attesting to the authority of the person filing the customs declaration, foreign trade contract, transportation documents, and others[40]. According to the law "On Veterinary Medicine", veterinary control is mandatory for the food that is imported into Ukraine. The law obliges importers to present a veterinary certificate issued by the exporting country.

The law "On the Basic Principles and Requirements for Food Safety and Quality" defines the objects of food safety measures in Ukraine. They are food products, processing aids, and objects and materials in contact with food products. The law "On State Regulation of Agricultural Imports" states that importing food, including milk and dairy products, is supervised by government authorities that regulate food safety and those that control veterinary medicine. In Ukraine, the State Service on Food Safety and Consumer Protection is the agency that performs both these functions.[41]

The law "On State Control over Compliance with the Legislation on Foodstuff, Forages, By-products of an Animal Origin, and Health and Well-being of Animals" regulates the importation of food products into the customs territory of Ukraine. It specifies requirements to the veterinary certificate and describes when the food products require physical

[36] Law of Ukraine "On Veterinary Medicine" 2498-XII, current edition from 13.02.2020 https://zakon.rada.gov.ua/laws/show/2498-12#Text [Ukr.]
[37] Law of Ukraine "On the Basic Principles and Requirements for Food Safety and Quality" 771/97-VR, current edition from 16.01.2020 https://zakon.rada.gov.ua/laws/show/771/97-%D0%B2%D1%80#Text [Ukr.]
[38] Law of Ukraine "On State Regulation of Agricultural Imports" 468/97-VR, current edition from 20.09.2018 https://zakon.rada.gov.ua/laws/show/468/97-%D0%B2%D1%80#Text
[39] Law of Ukraine "On State Control over Compliance with the Legislation on Foodstuff, Forages, By-products of an Animal Origin, and Health and Well-being of Animals" https://zakon.rada.gov.ua/laws/show/2042-19#Text [Ukr.]
[40] Customs Code of Ukraine https://zakon.rada.gov.ua/laws/show/4495-17#n2229 [Ukr.]
[41] Cabinet of Ministers of Ukraine. Decree #667 On approval of the Regulation on the State Service of Ukraine for Food Safety and Consumer Protection of September 2, 2015 https://zakon.rada.gov.ua/laws/show/667-2015-%D0%BF#Text [Ukr.]

inspection, including laboratory testing. Laboratory testing may be needed if cargo in the previous shipment from the same enterprise was identified as hazardous if Ukraine receives information about a possible hazard in the shipped cargo through the Rapid Alert System for Food and Feed and some other instances.

Besides, the requirements "On Import (Shipment) of Food Products of Animal Origin, Feed, Hay, Straw, as well as By-Products of Animal Origin and Products of their processing, into the Customs Territory of Ukraine" issued by the Cabinet of Ministers of Ukraine[42], require that milk and dairy products that are imported into Ukraine are manufactured at the enterprises with the HACCP system in place and comply with hygienic and safety requirements. In particular, these requirements state that the raw milk that is imported into Ukraine must originate from healthy cows and specify the minimal necessary level of processing the milk that is used in the dairy products imported into Ukraine. One company interviewed by the IER said that Turkish businesses are interested in the Ukrainian dairy processing sector. A Turkish company has contacted them about producing their goods in Ukraine.

4. Impact of the FTA with Turkey

Companies interviewed by the IER are not well informed regarding what precisely the FTA with Turkey will entail for Ukraine. While some of them express positive expectations and hope that the FTA will lower or reduce import tariffs for Ukrainian products, others are cautious that it may become a challenge if Ukraine does not protect its sectors and jobs. One company said that as a popular tourism destination, Turkey has a well-developed HoReCa sector. Ukrainian dairy exporters could meet the demand for dairy products in this sector, according to this company.

We modelled several policy shocks to assess the impacts on FTA with Turkey on Ukraine, including:

- The reduction in trade costs due to reduced time required to import or export goods, both on the Ukrainian and the Turkish sides;
- The reduction of non-tariff barriers on goods by both Ukraine and Turkey;
- The mutual elimination of tariffs between Ukraine and Turkey; and
- The reduction of barriers on foreign providers of services for selected categories of services, not including tourism and hospitality sector.

As the dairy sector is extremely protected in Turkey, direct policy changes related to this sector are crucial both for the sector and for the economy as a whole.

The model shows that in the case of deep liberalization FTA, the output can increase by an impressive 29.5% for the dairy sector, driven predominantly by the removal of prohibitively high import duties by Turkey. The reduction of time-in-trade costs on both exports and imports thanks to trade facilitation measures will also play a role. Still, their importance will

[42] Cabinet of Ministers of Ukraine. Requirements On Import (Shipment) of Food Products of Animal Origin, Feed, Hay, Straw, as well as By-Products of Animal Origin and Products of their processing, into the Customs Territory of Ukraine, document number z0347-19 https://zakon.rada.gov.ua/laws/show/z0347-19#Text [Ukr.]

be much smaller compared to the positive shock for the sector generated by tariff elimination. The sector's exports will increase by 153.8%, while the imports will shrink by 4.1%. Still, the expansion of domestic production will drive domestic supply by 9.3%, pushing down the prices.

5. Conclusions and recommendations

The dairy sector contributes about 0.4% to the GVA, with over half of which generated by the SMEs. The sector has been attractive to foreign investors: Danone S.A., PepsiCo, Lactalis, The Bel Group, and Savencia Fromage & Dairy, having manufacturing facilities in the country.

The main challenges faced by the sector is the shortage of raw milk as the cattle headcount has been steadily declining, counterfeit products, and product quality. The latter has been gradually improving over the last several years as Ukraine has progressed in the food safety system reform, including the full-scale implementation of the HACCP and new milk quality regulations. However, the improvement in food safety comes at the cost of increasing the prices of dairy products.

Dairy processing companies expect the FTA with Turkey to reduce high import tariffs in Turkey and stimulate exports. At the same time, they are afraid of increased domestic competition. Recently, the opening of the Ukrainian market for EU products resulted in the growing imports that bother domestic manufacturers.

The modeling results confirm that deep liberalization FTA entailing the elimination of extremely high import duties on dairy products will boost both exports and domestic production of the sector significantly.

To facilitate the sector's development and use the opportunities of potential FTA with Turkey, we suggest focusing on:

- The further improvement of food safety controls and standard compliance to increase competitiveness;
- The development of cattle farming to ensure the raw milk supply;
- The elaboration of training offering up-to-date sector knowledge and skills;
- The fight with counterfeit products and unregistered activity to ensure a level-playing field in the sector.