Analysis of economic contribution of the dairy processing industry to the Dutch economy

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28 August 2024 | Final Version

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28 August 2024

Any person intending to read this Report should first read this letter.

[redacted]

This report ("Report") was prepared on the specific instructions of the Nederlandse Zuivel Organisatie ("you", "NZO" or the "Client") solely for the purpose of presenting certain economic and financial analyses in connection with a study to determine the economic contribution of the dairy sector to the Dutch economy ("Services" or "Purpose"), as specified in the engagement agreement between NZO and EY Strategy and Transactions ("EY" or "we") dated 27 February 2024 ("Engagement Agreement"). The nature and scope of the Services, including basis and limitations, are detailed in the Engagement Agreement.

Purpose of our Report and restrictions on its use

This Report was prepared on the specific instructions of NZO, solely for the Purpose and should not be used or relied upon for any other purpose. The Report and its content may not be quoted, referred to or shown to any other parties except as provided in the Engagement Agreement.

We accept no responsibility or liability to any person other than to NZO and accordingly if such other persons choose to rely upon any of the contents of this Report they do so at their own risk.

Whilst each part of the Report addresses different aspects of the work we have agreed to perform, the entire Report should be read for a full understanding of our findings. Our work commenced on 27 February 2024 and was completed on 28 June 2024. Therefore, this Report does not take account of events or circumstances arising after 28 June 2024 and we have no responsibility to update the Report for such events or circumstances.

We prepared this Report for the benefit of NZO and have considered only the interests of NZO. We have not been engaged to act, and have not acted, as advisor to any other party. Accordingly, we make no representations as to the appropriateness, accuracy or completeness of the Report for any other party's purposes.

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Nature and scope of the Services

In preparing this Report, our analysis was based on desktop research and relies on data provided by NZO and the dairy processors ("NZO members"). The contents of our Report have been reviewed by NZO and NZO has confirmed to us their factual accuracy.

We have not been notified that any information supplied to us, or obtained from public sources, was false or that any material information has been withheld from us. We do not undertake responsibility in any way whatsoever to any person in respect of errors in this Report arising from incorrect or incomplete information provided by the information sources used.

We do not imply, and it should not be construed, that we have verified any of the information provided to us, or that our enquiries could have identified any matter that a more extensive examination might disclose.

We highlight that our analysis and Report do not constitute advice or a recommendation to NZO on a future course of action. This Report is protected by proprietary rights and may be quoted, referred to or distributed on the basis set out in the Engagement Agreement.

By its very nature, the scope of work cannot be regarded as an exact science and the conclusions arrived at in many cases will necessarily be subjective and dependent on the exercise of individual judgment.

We appreciate the opportunity to provide our Services to you. Please do not hesitate to contact us if you have any questions about this engagement or if we may be of any further assistance.

Yours sincerely,

EY Strategy and Transactions

Tobias Broeders - Partner

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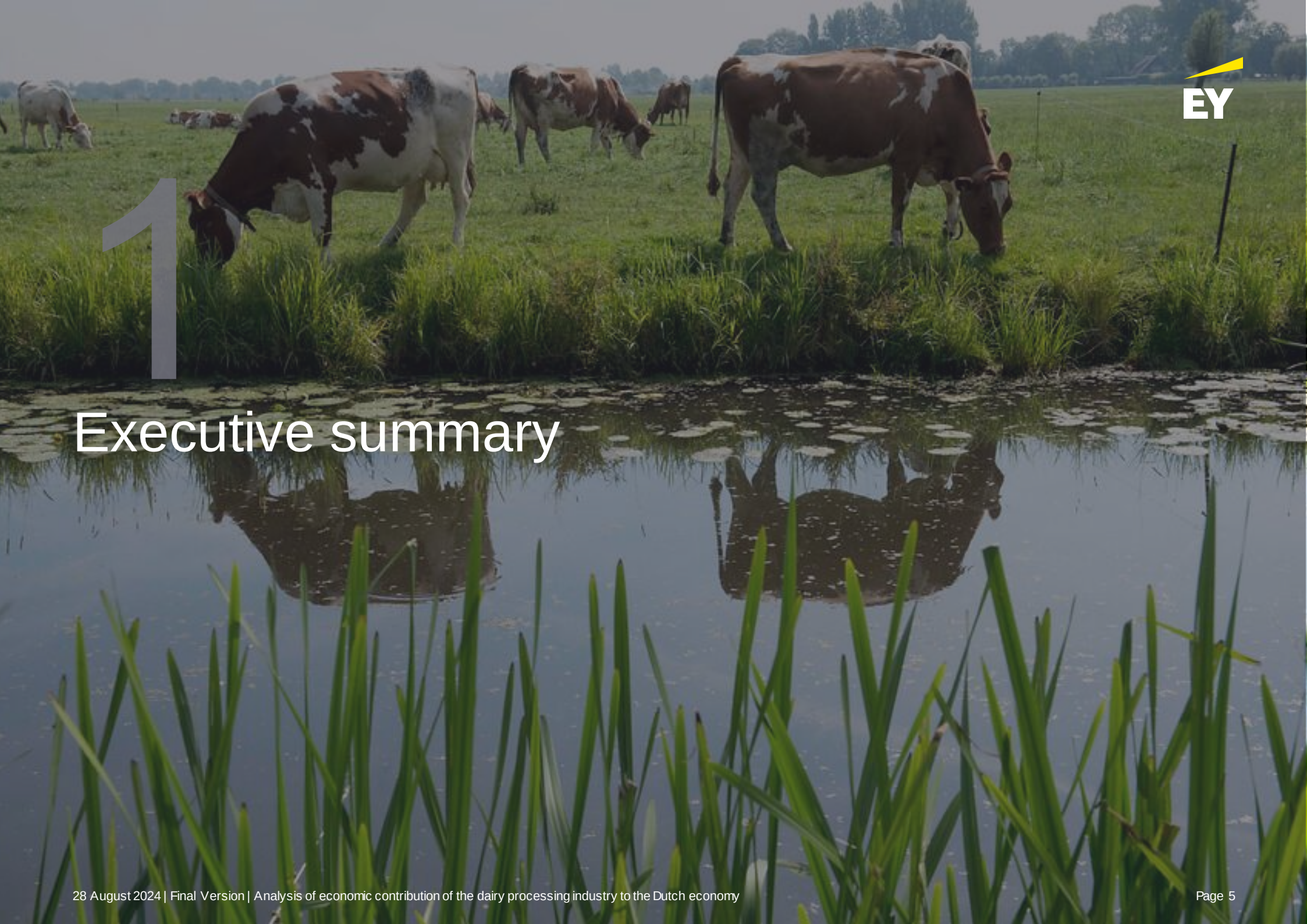


1 Executive summary

The Dutch Dairy industry is a key contributor to the Dutch economy through its gross value added and its job provision

Total impact of the dairy industry on the Dutch economy in 2023

€27.3 billion in total output

In terms of total output, the economic impact of dairy processing companies in the Netherlands is estimated to be around €27.3bn.

This total is derived mostly from operational activities (€26.2bn) and partly from their capital expenditures (€1.1bn).

This total output comprises €11.1bn from direct contribution through the dairy processors' revenue, €12.7bn of indirect output generated via the supply chain and lastly €3.4bn of induced output through wage spending.

The output impact reflects the total revenue generated across all economic sectors due to the activities of dairy processors.

This total revenue of the sector is significant to the Dutch economy, amounting to €27.3bn.

Total added value of the dairy industry on the Dutch economy in 2023

€8.3 billion in total gross added value

In 2023, the Dutch dairy sector contributed an estimated €8.3bn in gross value added (GVA) to the Dutch economy.

GVA represents the economic value added by the operations of dairy processors, encompassing employee compensation and generated profits.

The estimated €8.3bn encompasses €8.0bn from operational activities and €0.3bn from capital investments.

This contribution comprises €1.7bn direct contribution through wages and profits, €5.0bn indirect contribution via the Dutch supply chain and €1.6bn induced contribution via employees spending their wages in the wider economy.

The €8.3bn GVA generated by the dairy industry is equivalent to ~1% of the total Dutch economy in 2023.

The dairy industry plays a critical role in the Dutch rural economy

83,510 jobs supported in The Netherlands

The Dutch dairy industry supports a total of 83,510 full time employee (FTE) jobs across the economy.

This includes 12,100 direct jobs at dairy processors, 56,720 indirect jobs via the Dutch supply chain (including the dairy farmers) and 14,690 induced jobs in the Dutch economy via employees spend.

With these jobs in the sector and the supply chain of the processing industry, the dairy sector is a key contributor to the Dutch rural economy, especially in the Overijssel, Gelderland, Friesland and Noord-Brabant regions (in terms of number of dairy farms, dairy factories and dairy cows).

Dairy is a significant contributor to the Dutch rural economy, supporting jobs across its supply chain and the wider economy.

Processors continue to invest in their processing assets

€1.6 billion capex investment

Since 2019, Dutch dairy processors have invested €1.6bn in aggregate direct capital expenditures via the Netherlands-based suppliers, resulting in a total GVA of €1.6bn.

This includes a total of €0.3bn capital expenditure in 2023, which generated GVA and employment contribution in the Dutch economy.

Dairy processors continue to invest in their plants to ensure the highest quality dairy ingredients are produced, which contributes positively to the regional economy.

*Please note that these metrics are based on data from 11 of 13 NZO members. Total GVA and output are expected be larger in reality for the whole sector (including non-NZO members and non-participating NZO members)

2 Value of the Dutch dairy industry to the economy

The Dutch dairy industry is an important contributor to the economy and a highly productive industry facing regulatory and geopolitical changes

Dutch dairy industry overview

NZO member companies

- Rouveen
- Hoogeveen
- Lopik
- Amstelveen
- Katw oude
- Westbeemster
- Bolsw ard
- Schoonrew oerd
- Amersfoort
- Nijkerk
- Zw olle
- Bleskengraaf

Source: NZO, 2024

The dairy sector is rooted in the Dutch society and is part of the national identity with its rich history. The vast and diverse industry comprises cooperatives, family businesses and private operations across all Dutch provinces. The Netherlands is a proud dairy nation and is among the top 4 milk producing countries in the European Union (EU). From an economic perspective, the dairy sector is a key contributor to the Dutch economy, accounting for €27.3bn of output and €8.3bn GVA in 2023.

The Netherlands has approximately 14,300 dairy farms, delivering 13.9 billion kgs of milk processed across 53 dairy processing plants. The dairy processing plants are owned by dairy companies, either a cooperative, or a private company. Most of the processing locations are located near the dairy farmers, the raw milk suppliers. It means that the dairy processing plants are situated in the rural areas and can be found across the Netherlands. Over time processing locations have merged and the Dutch dairy processors developed into a capital intensive industry and is subject to global developments and environmental measures.

The Dutch dairy sector owes its strong global market position primarily to its reliable products and innovative capabilities. Dutch dairy products enjoy a global reputation for excellence, built on consistent quality achieved through years of professional expertise and rigorous quality controls. Additionally, Dutch dairy cattle is among the most efficient in Europe, producing 25% more milk per cow in 2023 than the EU average, according to data from Statistics Netherlands (CBS) and Eurostat. Cows benefit from the Dutch climate and the rich grasslands. Cows can graze outside on the land during the grazing season, and the grass can be mowed for feed in the barn or for the winter. As a result, Dutch cows produce nutritious milk, rich in fat, protein, lactose, vitamins, and minerals.

The Dutch Dairy industry at a glance

13.9bn
kilogram milk supply in The Netherlands

47 cent
average milk price per kilogram in 2023

1.6m
Cows in the Dutch dairy herd

12,100
People employed by dairy processing industry in The Netherlands

53
dairy processing facilities

14,300
Dairy family farms

€10bn
Dutch dairy export in 2023*

75%
Dutch milk supply stays within EU

6.1%
Contribution to National trade surplus

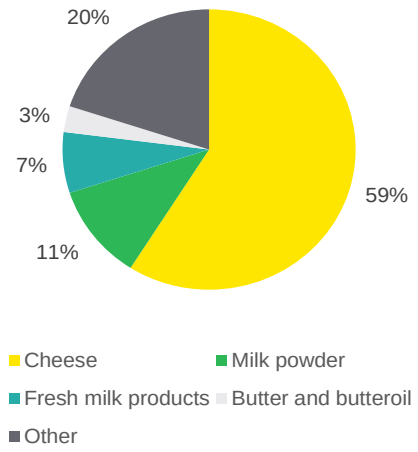
Source: NZO, ZuivelNL 2024

*Does not contain all dairy products and ingredients

The Netherlands is a major dairy producing and exporting country with cheese as its main product category

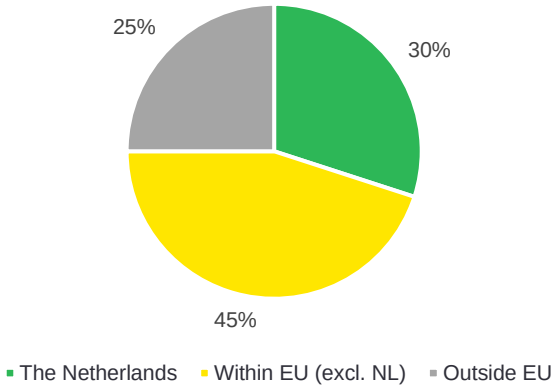
Dairy market statistics

Dairy output product split (in kg)



Source: NZO, 2024
* Please note that these proportions (in kg) are different from the split in sales value (in EURm), as shown on slide 13.

Destination of dairy products in the Netherlands



Source: NZO, 2024

Dutch dairy products

The Dutch dairy output product split

- In 2023, the Dutch dairy industry processed 13.9bn liters of milk, produced by ca.14,300 dairy farms across 53 processing facilities.
- In terms of milk production, the Netherlands ranks 4th in the EU after Germany, France and Poland. The yield of the Dutch dairy herd, however, exceeds that of these major milk producing countries.
- This dairy supply was transformed into a diverse array of products, predominantly cheese (accounting for 59% of the product volume). Other product categories include fresh milk products (including drinking milk), milk powder (skimmed and non-skimmed), butter and butteroil as well as others (e.g., dairy ingredients).
- Cheese plays a significant role in the Dutch consumer market and export sector. As reported by the CBS, Dutch consumers consume an average of 22.1 kg of dairy cheese per person per year, encompassing both domestically produced and imported varieties. Despite this significant domestic consumption, the majority of cheese is exported to other countries as Dutch cheeses, such as Edam and Gouda, are renowned worldwide.

Dairy export

- The EU is the most important sales region for Dutch dairy products. Of the total available dairy products, 75% are sold within the EU (of which 30% in the domestic market). The remaining 25% is exported to countries outside of the EU.
- On the basis of trade value, Dutch export of dairy products (mainly cheese and high value added products) amounted to EUR 10.3 billion. While this represents a 4.1% decline from 2022, this is mainly attributable to price effects after a significant increase in dairy market prices in the previous year, as prices normalize after geopolitical developments. Export volumes of all product categories, apart from milk powder and whey products, in fact grew in 2023. Compared to 2019, the dairy export grew on average 7.2% per annum over the last four years.
- The EU member states – especially Germany, Belgium and France – are by far the most important markets for the export of Dutch dairy products, accounting for circa 73% of total export value. Main export destinations outside of the EU are China, the United Kingdom and Korea.

Dutch dairy products are renowned globally for their dependable and high quality

Dairy quality

- Dairy is an efficient source of high-quality proteins and essential nutrients, and Dutch dairy products have earned a good reputation globally, thanks to consistent quality achieved through years of industry knowledge and focus on quality checks.
- At dairy farms, high occupational hygiene, animal health, and standards for milk production storage are ensured through European and additional Dutch standards. Regular inspections and independent laboratory testing are done to ensure adherence to quality standards. In terms of feed, the grass and silage, supplemented with corn and concentrates, consumed by Dutch cows are closely monitored to prevent contaminants. The Netherlands Food and Consumer Product Safety Authority ensures regulatory compliance, while SecureFeed, an independent quality organization, monitors additional feed requirements.
- For transport, trained drivers pick up milk in dedicated dairy tankers, conducting initial quality checks upon collection. Driver education and expertise are overseen by the government in collaboration with the Dutch dairy industry to regulate milk transport rigorously. In terms of milk processing, government oversight ensures factories comply with high standards, with independent audits maintaining high quality and safety. Dairy companies may obtain COKZ certification for processing and export, and cheese production even follows additional certification procedures to ensure global quality and safety standards.

Dutch dairy sector strives to develop a sustainable value chain and is committed to its carbon footprint reduction ambition

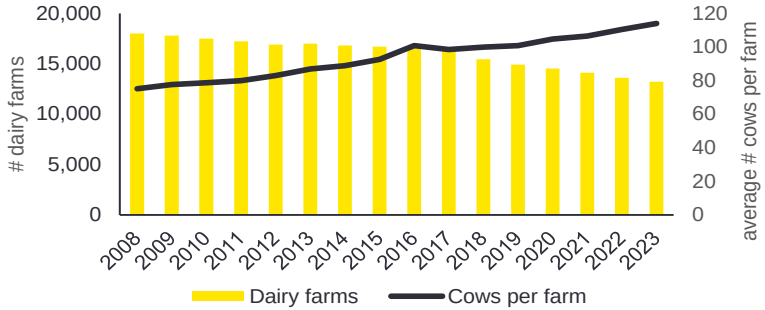
Sustainable dairy sector

- Dairy processing companies and dairy farmers work together on the Sustainable Dairy Chain Initiative (DZK) to create a sustainable dairy production. The DZK has an integral approach towards objectives on various sustainability themes, like climate sensible dairy production, biodiversity conservation, improving animal health and welfare, and outdoor grazing. Progress on the DZK goals is independently monitored by Wageningen Economic Research (WEcR).
- By adopting sustainable production practices, the dairy sector contributes actively to the reduction of greenhouse gases in the Netherlands, as agreed upon in the Climate Agreement. Reducing greenhouse gas emissions in the entire dairy chain is one of the objectives of the integral DZK initiative and is achieved by means of (i) measures in the areas of animal, feed, manure storage and manuring; (ii) energy saving and production of sustainable energy; and (iii) measures with respect to land use.
- In 2022, the product carbon footprint of milk was on average 1,127 gram CO_2-equivalent per kilogram of measuring milk, according to 'Deelrapportage Klimaatverantwoorde zuivelsector 2022' from Wageningen University.

As the Dutch dairy sector has been steadily consolidating, milk production grew on the back of the abolishment of milk quotas; a slight downward trend then followed after the 2016 peak

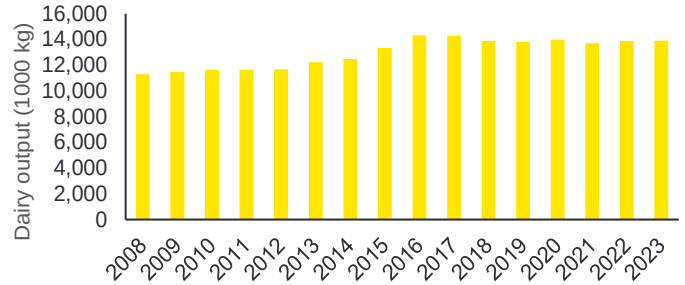
Dutch dairy industry key developments

Number of dairy farms



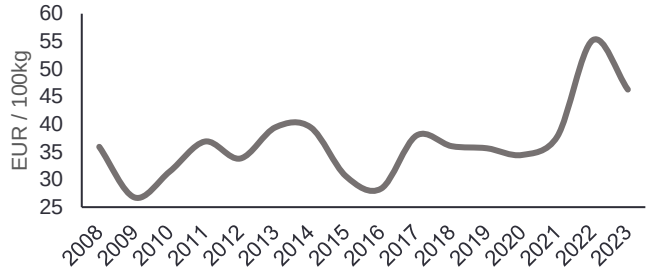
Source: Wageningen University economic research, 2024
* (Rounding) data difference between Wageningen University and NZO data

Milk output



Source: CBS, 2024

Dutch raw milk price development



Source: European Commission, 2024

Dairy farm consolidation

- Over the last 25 years, Dutch dairy farms have consolidated, reducing the number of farms and increasing their average size, due to financial challenges, increasingly complex legislation, ageing of dairy farmers and a shortage of successors.
- The number of dairy cows peaked at nearly 1.7 million in 2016, growing 7.7% compared to 2015. Since then, the total number of cows has slightly declined to almost 1.6 million cows by 2023.

Dairy output

- Historically, dairy output grew strongly, encouraged by the phase out and abolishment of the milk quotas in 2009 and 2015, respectively.
- The Dutch dairy output has remained relatively stable since 2016 with a slight downward trend, following from dairy market developments in Northwestern European milk producing countries. These include weakened profitability driven by increased costs and limited production from stricter regulations, succession and labor shortages, as well as more extreme weather conditions having an adverse impact on herd health and milk yields (Rabobank, 2024).

Dairy pricing

- In 2022 there was a significant increase in dairy prices, primarily due to the COVID-19 pandemic.
- After this sharp price increase, market prices of dairy products underwent a price correction.

Dairy legislation timeline

1984
Introduction of milk quotas in the EU. Two quotas were installed for each EU member state: a defined maximum amount of milk delivered to dairy processors and a limit for direct sales at farm level. The milk quotas were introduced to address the EU's dairy oversupply in the late 1970s and early 1980s.

2003
Luxembourg Agreements on reforms on Common Agricultural Policy to retain the quota system at least until 2015.

2009
EU decides to phase out milk quota period by increasing quotas by 1% each year.

2015
Abolishment of milk quotas. The main reason for this was the significant increase in global dairy consumption and the need for EU producers to meet this growing demand.

2024
EU elections, with possible new legislation for the European dairy industry, increasing uncertainty for farmers and dairy processors.

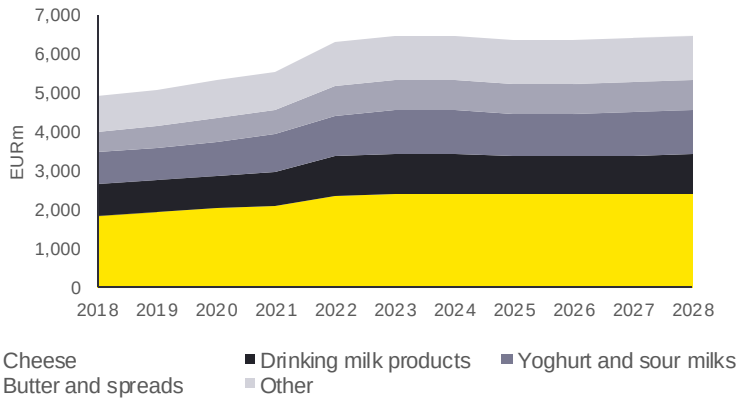
In the upcoming years, expected decline in milk production, driven by reduced profitability and regulatory development, will likely shift dairy companies towards more value added products

Historical and forecasted dairy sales in The Netherlands

- The 2027 EU water-quality regulations deadline will significantly impact EU milk production, especially in livestock-dense northwestern Europe. In The Netherlands nitrogen derogation restrictions are already in place to meet EU regulations by 2026, and The Netherlands aims to reduce ammonia emissions by 50% by 2035. Challenges to lower impact on biodiversity loss, reducing greenhouse gas emissions, and shortage of labor affecting farm profitability and accelerate consolidation, while water-quality and biodiversity regulations will likely reduce the dairy herd due to a lower carrying capacity per hectare and stricter chemical fertilizer use.
- Dairy companies face challenges from declining milk volumes and increasing regulatory constraints. This leads to revenue losses and overcapacity, which then result in lower profitability. A supportive environment for sustainable farming practices and consistent policies is essential to mitigate these challenges, with dairy companies needing to adapt proactively to avoid harsher consequences. Strategies to address expected loss in revenue include, for instance, allocating more scarce milk deliveries to more value added, profitable product ranges such as cheese and protein ingredients.
- In May 2024, the four future Dutch coalition parties PVV, VVD, NSC, and BBB reached an outline agreement to adapt European directives on agriculture and manure policy for a level international playing field and relaxation of rules, while promoting new revenue models for agricultural entrepreneurs and the processing industry. Although still uncertain, this proposed policy bodes well for the dairy sector.
- There is a noticeable trend among Dutch consumers towards health and wellness-focused diets. For the dairy industry, this trend shows a decline in demand for traditional drinking milk, but an increasing demand for high-protein dairy products. The expectation is that the increased demand for high-protein products does not fully compensate the decline in demand for traditional drinking milk in terms of volume. However, in terms of value the dairy market is expected to be relatively stable.

Source: Rabobank, 2024 & Euromonitor International, 2023, EY analysis

Expected market trends in the Dutch dairy market



Source: Euromonitor International, 2023

* Please note that these proportions (in EURm) are different from the split in sales volume (in kg), as shown on slide 9.

- According to Euromonitor, from 2023 onwards, Dutch dairy sales are expected to remain relatively stable, changing slightly from €6.5bn in 2023 to €6.4bn in 2028.
- The distribution among product categories is also expected to stay stable with on average 37.5% cheese, 17.3% yoghurt and sour milks, 15.7% drinking milk products, 11.9% butter and spreads, and 17.5% other products.
- The dairy industry is facing rising costs due to increasing commodity prices, such as essential grains and fertilizers. This causes increases in average unit prices for most dairy products, which are expected to offset lower sales volumes, leading to a stable forecasted sales value.
- This market outlook indicates a stable demand in all (retail) products, notably cheese, as well as the importance of the domestic market. These should serve as mitigating factors for the expected milk volume decline, as dairy processors pivot towards more value added products.
- It is worth noting that the production of cheese (in kg) has been trending upwards over the years, while the allocation of available milk pool to cheese production has also been increasing.

3 Economic impact assessment

The impact of the Dutch dairy industry on the economy was calculated using an economic Input-Output model

Input-Output methodology

What is Input-Output methodology?

- The methodology used in this study is based on the Input-Output approach which describes the relationships between different sectors of the economy and allows for the estimation of the total contribution of a particular activity.
- Different sectors in the economy depend on each other through a network of supplier-customer relationships. Outputs from one sector are used as an input into another industry. These interdependencies among industries are captured in Input-Output tables (IOTs).
- This study uses the representation of IOTs for The Netherlands published by the Organisation for Economic Co-operation and Development (OECD) for the 2019 reference year.[1]

What are economic multipliers?

- This methodology applies mathematical operations with IOTs to derive a set of economic multipliers, which measure the ratio between the initial contribution (e.g. spend by the dairy processors in the Dutch supply chain) and the total contribution (total number of jobs in The Netherlands supported by activities of the Dutch dairy industry).
- The size of a multiplier depends on the extent of linkages between the sector and its supply chain. The greater the linkages between organisations and their supply chain, the larger the multiplier will be.
- However, the impact is subject to leakages. When intermediate goods and service are purchased from overseas, this reduces the size of the multiplier as it provides stimulus to areas outside The Netherlands. These benefits are not included in this study.
- Each type of supply was mapped to an economic sector and the appropriate multiplier is assigned to each product and service consumed in the supply chain.

What is Economic Impact Assessment?

- Economic Impact Assessment (EIA) is the application of economic analysis and modelling to quantify the total economic contribution or impact of a chosen company or industry.
- EIA provides an evidenced based measure of the value organisations and industries bring to the country in which they operate.
- This study uses an Input-Output model of the Dutch economy based on the IOTs compiled by the OECD as well as financial and economic data collected from the Dutch dairy processors.
- The data collected on supply chain purchases was split between the Dutch and overseas suppliers, and domestic supplies were mapped to the supplier's industry based on the product types and fed into the Input-Output model.

[1] OECD, Input-Output Tables (https://www.oecd.org/sti/ind/input-outputtables.htm)

This study captures the Dutch dairy industry's direct impact on the economy as well wider contribution

Economic Impact Assessment measures

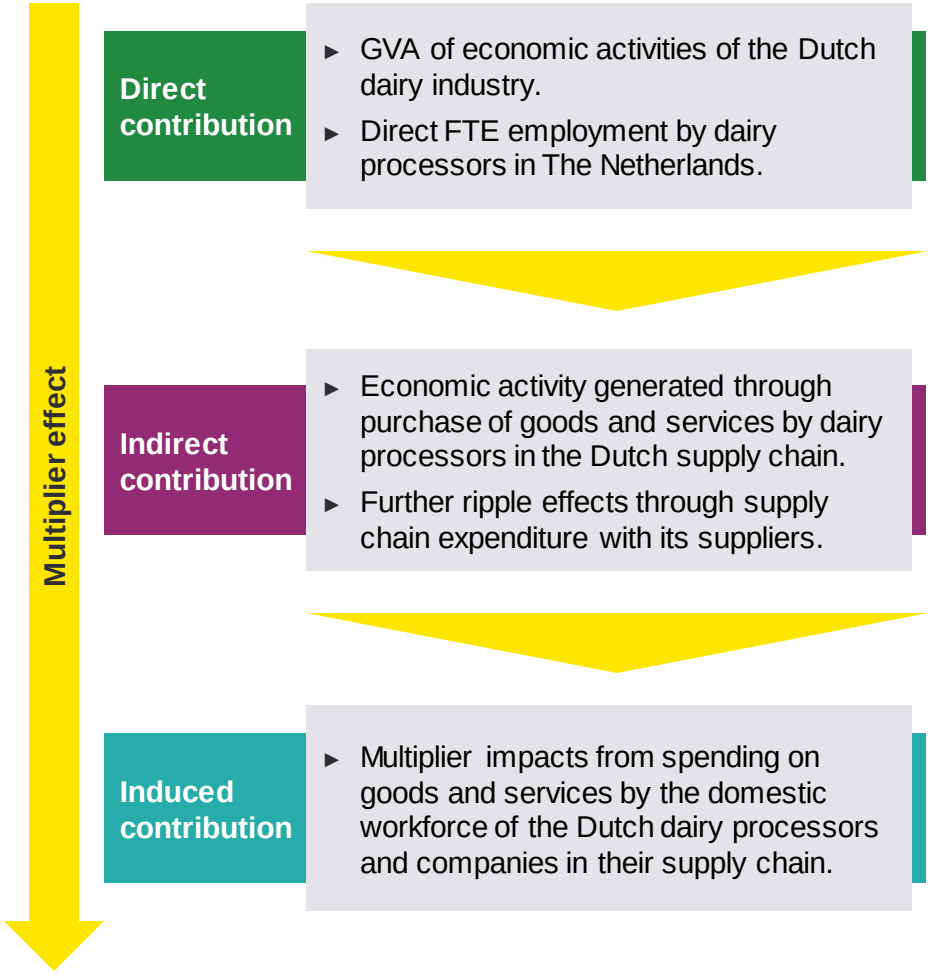
The value generated by the Dutch dairy industry is measured in this study using the following macroeconomic measures:

- **Output**: The output impact shows the total output (revenue) across all sectors of the economy associated with dairy processor activities. This measure contains an element of double counting as output of one company uses output of its suppliers. Therefore, Gross Value Added (GVA) is more commonly used to measure the economic contribution.
- **GVA**: GVA represents the value added contributed to the economy attributable to the dairy processors' operations including compensation of employees and profits generated.
- **Employment**: The employment impact shows the number of full-time equivalent (FTE) people employed throughout the economy in order to support dairy industry activities.

This study distinguishes three types of contribution:

- **Direct contribution**: Direct economic activity of dairy processors (revenue, compensation of employees, profits and employment).
- **Indirect contribution**: This represents contribution of firms in dairy processors' supply chain (e.g. milk suppliers, materials suppliers, packaging, transport), whereby these firms add value to the goods and services purchased by the Dutch dairy industry and in its further transactions with other firms in the supply chain.
- **Induced contribution**: It results from the expenditure of dairy processors' employees and those in the supply chain.

The analysis is based on the data collected about the Dutch operations of dairy processors and assumptions to split out domestic and foreign operations, where appropriate. Dutch impacts only were estimated.



Total economic contribution is the sum of the direct, indirect, and induced impacts

The dairy industry is estimated to have had a total GVA contribution of €8.3bn (0.8% of the total) and supported 83,510 full-time jobs (1.0% of the total) in The Netherlands in 2023

Summary of economic contribution – operational and capital expenditure[1]

In 2023, the Dutch dairy industry facilitated an estimated

€8.3bn Gross Value Added (GVA)

via operational activities (€8.0bn) and through its capital expenditure (€0.3bn). This comprises:

- **€1.7bn**: direct contribution through wages and profits
- **€5.0bn**: indirect contribution via Dutch supply chain.
- **€1.6bn**: induced contribution via employees spend.

The sector's GVA contribution amounts to 0.8% of the total economy. It should be noted that the dairy sector plays a more significant role in the rural areas and would have greater economic contribution to the region outside of the Randstad.

In 2023, Dutch dairy processors supported an estimated

83,510 full-time equivalent (FTE) jobs per year

via operational activities (80,900) and through its capital expenditure (2,610). This comprises:

- **12,100**: direct jobs at dairy processors
- **56,720**: indirect jobs via Dutch supply chain.
- **14,690**: induced jobs supported through employees spending their salaries in the economy.

The dairy sector employs relatively more outside the urban areas. Excluding the Randstad FTEs, the employment contribution would be greater.

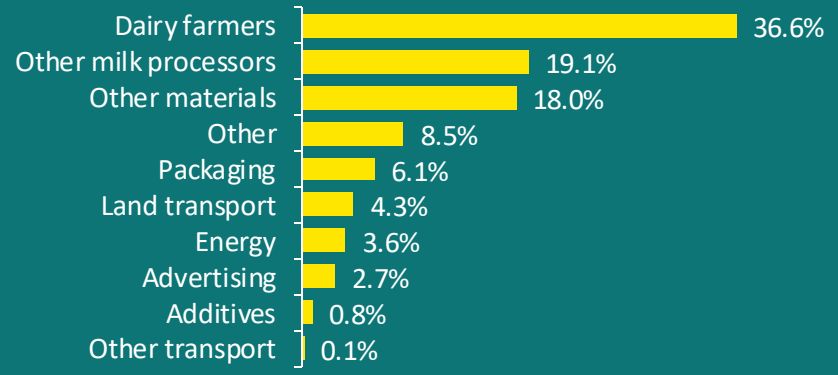
Since 2019, the Dutch dairy industry committed in aggregate

€1.6bn direct capital spending

with Dutch-based suppliers.

This includes a total of €0.3bn capital expenditure in 2023, which generated GVA and employment contribution in the Dutch economy.

Over a half of total supply chain purchases by dairy processors is milk and dairy products

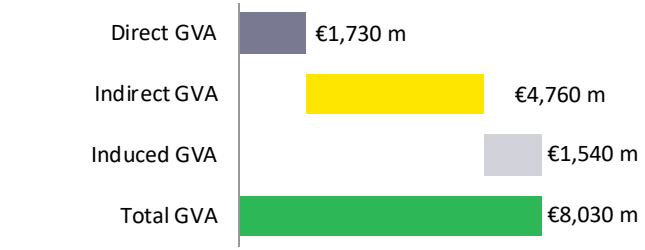


[1] The data on revenue, employment, supply chain and capital expenditure comes from a survey of dairy processors and was validated using the public statistics. This implies that the analysis captures the economic impact of the dairy processing and upstream activities only.

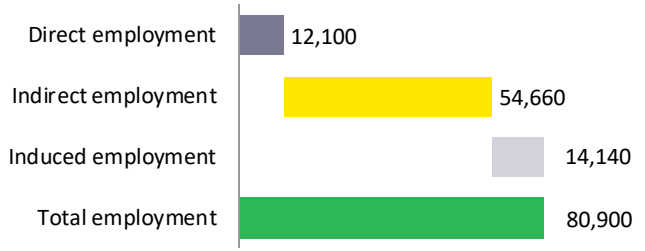
Dairy processors' operational activities supported a total of €8.0bn in GVA and 80,900 jobs in The Netherlands in 2023

Economic contribution – operational expenditure

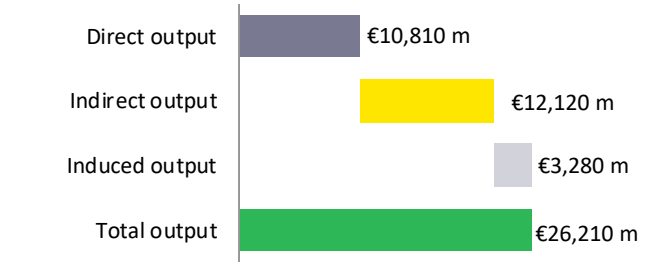
2023 Total GVA: €8.0bn



2023 Total FTEs: 80,900



2023 Total Output: €26.2bn



GVA contribution of operational spending

- The analysis shows that, through its operational activities in The Netherlands, the dairy industry contributed a total of **€8.0bn in GVA terms** to the national economy in 2023, comprising:
  - Direct GVA of €1,730m reflecting the wages and salaries paid by the dairy processors and operational profits generated.
  - Indirect GVA of €4,760m demonstrating the contribution generated through the supply chain.
  - Induced GVA of €1,540m capturing the impact of direct and indirect employees spending the wages associated with their employment at dairy processors and companies in supply chain.

Employment supported as a result of operational spending

- Dairy processors generate and support employment opportunities both directly, at their factories and offices, and across the wider Dutch economy via their linkages with other companies.
- In 2023, Dutch dairy processors supported, as a result of operational spending, a total of **80,900 FTE's** in the economy of The Netherlands. This comprises:
  - 12,100 direct FTEs employed by dairy processors in The Netherlands.
  - 54,660 indirect FTE jobs supported as a result of supply chain expenditure.
  - 14,140 induced FTE jobs supported by employees spending their wages.

Output contribution of operational spending

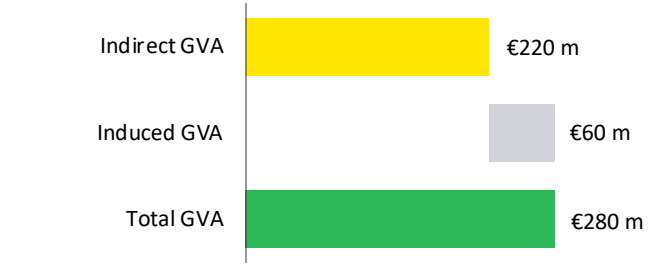
- When measured in output terms, Dutch dairy processors contributed an estimated €26.2bn to the Dutch economy.[1] This comprises:
  - €10,810m of dairy processors' revenue in The Netherlands.
  - €12,120m of indirect output generated via the supply chain.
  - €3,280m of induced output supported through wage spending.

[1] The output contribution should be utilised with caution as it covers the whole of companies' revenues including their intermediate consumption in addition to the value added, which represents double counting.

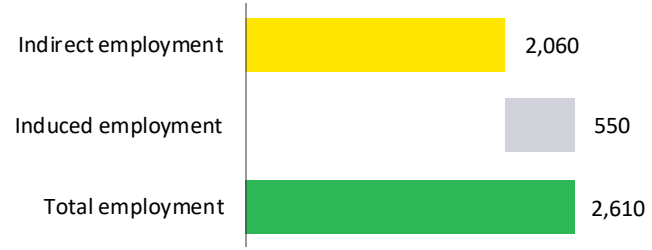
Dairy processors' capital expenditure in The Netherlands supported a further €0.3bn in GVA in 2023 and a total of €1.6bn since 2019

Economic contribution – capital expenditure

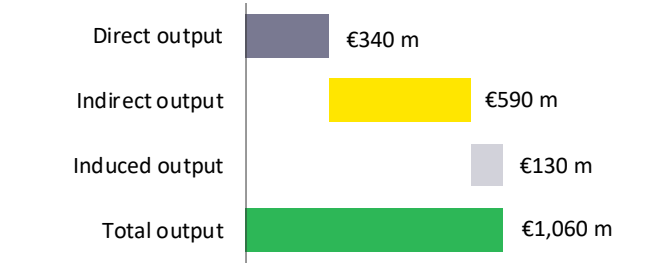
2023 Total GVA: €0.3bn



2023 Total FTEs: 2,610



2023 Total Output: €1.1bn



Historical capital investment

- Since 2019, they committed around **€1.6bn of capital spending**, or over €0.3bn per year on average. This expenditure has supported the following economic contribution:
  - Indirect GVA of €1.3bn in aggregate and indirect employment of 1,880 FTEs per year on average, driven by economic activity generated with Dutch capital goods providers.
  - Induced GVA of €0.3bn in aggregate and induced employment of 500 FTEs per year on average capturing the economic activity generated by employees spending their wages in the Dutch economy.

Capital spending by Dutch dairy processors

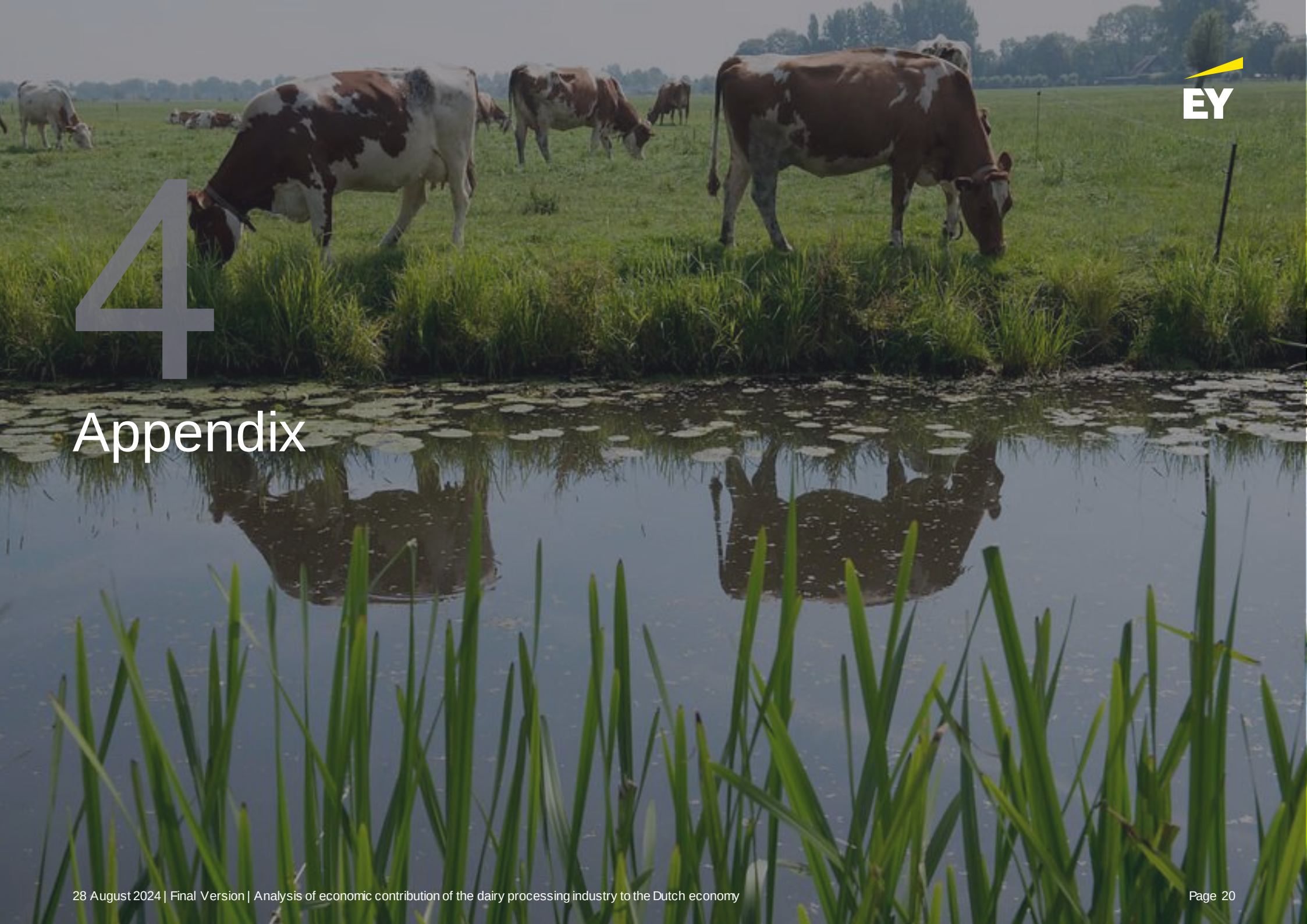
- Capital investment by the Dutch dairy industry generates demand for capital goods suppliers. These suppliers, in turn, procure goods and services from their respective supply chain creating further economic activity across the economy of The Netherlands. In 2023, Dutch dairy processors spent a total of €340m in capital expenditure on Dutch-based suppliers.

GVA contribution of capital spending

- The study estimates that capital expenditure incurred with Dutch-based suppliers contributed **€0.3bn in GVA** to the economy of The Netherlands in 2023. This is broken down into:
  - €220m of indirect GVA driven by spend on capital goods in the Dutch economy.
  - €60m of induced GVA associated with the economic activity generated through spending by dairy processors employees and employees in their supply chain.

Employment supported as a result of capital spending

- This capital expenditure is estimated to have supported a total **2,610 FTE**, including:
  - 2,060 indirect FTE jobs driven by capital spending in the Dutch supply chain.
  - 550 induced FTE jobs associated with employees spend in the wider Dutch economy.



4 Appendix

We used data gathered from NZO members to determine the contribution of the Dutch dairy industry to the Dutch economy through our economic analysis model

Research process

Information gathering

Private information gathering

- EY prepared a template, which was circulated to all NZO members, to gather standardized (historical and prospective) information from the companies from the operation, financial and investment perspectives.
- For the economic impact assessment, only historical financial, investment and number of employees data was applied.
- We note that two out of the 13 NZO members opted out of participating in the study. Therefore, the results should be interpreted with the understanding that the gathered data is largely, but not entirely, complete.

Public information gathering

- EY has analyzed publicly availably research and data on the European and Dutch dairy industry.
- This data has been analyzed to form a broad overview of the sector's historical development and expected future trends.

Information processing

Data review

- To ensure a uniform dataset, EY reviewed the gathered data and discussed specific questions or findings on the filled-out data templates with NZO members.
- Certain items were adjusted / corrected to as part of the aforementioned Q&A process.

Data aggregation

- EY subsequently aggregated all the collected and adjusted data to establish an anonymized and complete data set.

Economic analysis

Design research model

- An economic Input-Output model was built, which can process the gathered private data and calculate multiple outputs, such as total output, total GVA, total FTE and total capital expenditures. Further detail on the economic Input-Output model is provides in the next slides.
- EY analyzed the necessary economic data and integrated it into multipliers applicable to the gathered dataset and the economic Input-Output model.

Data analysis

- The collected data was processed through the research model to compute the relevant economic impact outcomes.

Reporting

- This report was drawn up to summarize the key assumptions, approach and results of our analysis.

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