Dairy Processing in South Africa

Prospects for increased participation of small and medium-sized enterprises

Project Brief, April 2020

Innovation & Inclusion in Agro-processing

ES/S0001352/1

Reena das Nair, Centre for Competition, Regulation & Economic Development, University of Johannesburg

www.iiap.info

THE UNIVERSITY of EDINBURGH

CCRED

ESRF

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

Innovation & Inclusion
in Agro-processing

Project Overview

Innovation and Inclusive Industrialisation in Agro-Processing is a two-year collaboration between researchers from the University of Edinburgh, the University of Johannesburg, and the Economic and Social Research Foundation, Tanzania.

The project is a comparative study conducted across Tanzania and South Africa focusing on three value chains: maize meal, citrus and dairy. The three aims of the study are:

- First, to describe the factors that determine innovation and inclusion in agro-processing
- Second, explain the challenges to promoting SME participation in agro-processing value chains
- Third, to use these findings to support industrial policy formulation at the national and regional level

In this project brief, we set out the key issues arising from our scoping work on dairy processing in South Africa.

1: Summary

Dairy products are important for the nutrition and health profile of South Africans, contributing significantly to meeting the key mineral, vitamin, fat and protein needs of the population. Milk production in 2018 was estimated at 3.4 million tonnes (Lacto Data, 2019), while consumption was around 2.2 million tonnes in 2016 (Who Owns Whom, 2019). Roughly 62% of dairy products are in liquid form (pasteurised liquid milk and ultra-high temperature (UHT) milk) and 38% in concentrated products form (such as hard cheese and butter). The dairy industry is also an important employer and export revenue earner for South Africa. Employment in the dairy processing or secondary level of the value chain accounts for around 10% of total employment in the Food and Beverages subsector within agriculture (Quarterly Employment Statistics, StatsSA). In terms of exports, South Africa has had a positive trade balance for dairy products since 2010, with significant exports to the Southern African Development Community (SADC) region of both liquid and concentrated dairy products (Quantec database).

Following the de-regulation of the agricultural sector in the 1990s, there has been consolidation at the primary milk production level of the value chain, with many small-scale farmers exiting. The secondary or processing level has similarly seen consolidation, and is currently dominated by large, multinational processors with strong vertical linkages throughout the value chain, particularly with logistics networks. These large players sell a wide range of branded and unbranded dairy products and have significant advantages over SME processors in accessing markets.

There are considerable barriers to entry and expansion for SME processors including meeting food safety and hygiene standards, accessing good quality raw milk, adhering to packaging regulations, dealing with rising packaging costs and accessing shelf space in national supermarket chains. The lack of finance for investment is also a challenge, as is the decline of skilled labour in the industry. What can be categorised as medium-sized dairy processors that largely supply at a provincial level have nonetheless shown resilience and growth. These have the potential to expand sales further to national and even regional SADC markets in niche products like cheese, 'maas' or sour milk, dairy blended juices and yoghurt. They also have the potential to supply house brands or private labels to supermarket chains.

There is a degree of vertical integration even amongst small-scale producers and processors through the 'producer-distributor' model. This model ensures guaranteed off-take of raw milk for smaller producers who have their own processing facilities on farms and allows them to produce higher value-added products. There is potential for this model to grow to serve local markets and communities. Many small processors sell through

independent wholesalers and retailers instead of supermarkets given the onerous requirements imposed on them by the chains.

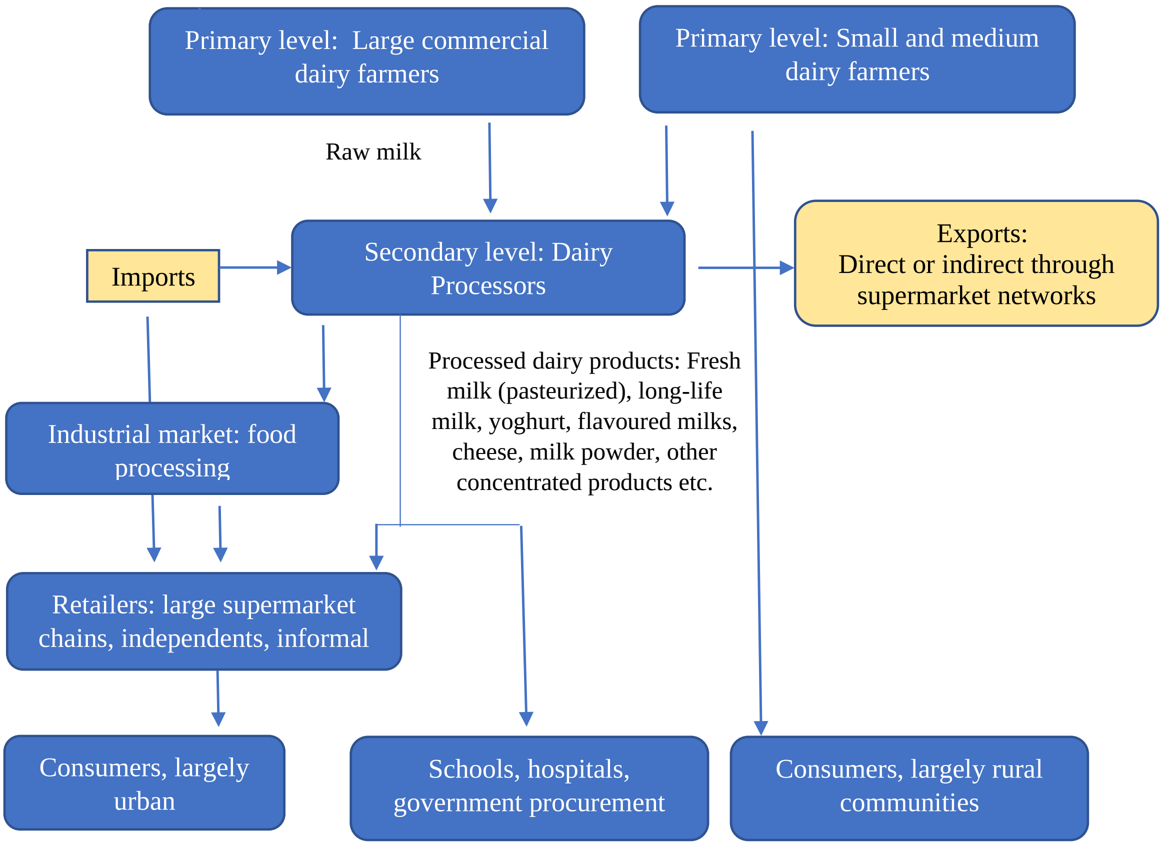
While there has been some support for medium-sized processors from government, there has been limited government support for small processors and declining levels of support for SME producers at the primary level. Industry associations also tend to represent the needs of the larger producers and processors.

2: The dairy value chain

Like most other agricultural products in South Africa, the dairy sector was until 1996 controlled by state-run agricultural boards that determined the pricing and marketing of dairy products. Following the abolishment of the boards, there was significant consolidation of the sector. Public bulk collection facilities were shut down and the number of dairy producers reduced significantly. Total output however increased given rising milk production yields of herds. The once highly regulated sector was, in a short space of time, opened up to intense competition, also contributing to the consolidation.

At the upstream or primary level of the value chain (Figure 1), dairy producers or dairy farmers produce raw or unprocessed milk from dairy cattle. In South Africa, around 1228 farmers produced most of the raw milk in 2019, decreasing from 3551 in 2009 (Lacto Data, 2019).

Figure 1: Dairy value chain in South Africa



Source: Author's own

Most raw milk is produced by a relatively small number of large commercial farmers that sell into formal markets. There are also small and medium sized dairy farmers who sell either directly to end consumers in informal markets and rural communities, or to the formal sector for processing. The main milk producing provinces in

Innovation & Inclusion in Agro-processing

South Africa are the Western Cape, Eastern Cape and Kwa Zulu Natal (Table 1). The decline in the number of producers in each province is evident in Table 1.

Table 1: Number of milk producers per province, 2011 - 2019

Province	Jan '11	Jan '12	Jan '14	Jan '15	Jan '16	Jan '17	Jan '18	Jan '19	Aug '19
Western Cape	683	647	529	533	502	481	419	402	394
Eastern Cape	314	283	264	262	251	244	212	201	202
Northern Cape	28	21	25	14	14	7	7	6	4
KwaZulu-Natal	323	322	281	267	253	247	221	212	215
Free State	601	535	389	328	280	249	206	165	155
North West	386	352	233	222	181	165	135	117	113
Gauteng	127	126	109	100	97	98	84	83	79
Mpumalanga	201	164	117	94	93	87	69	56	56
Limpopo	23	24	14	14	12	15	12	11	10
TOTAL	**2 686**	**2 474**	**1961**	**1 834**	**1 683**	**1 593**	**1 365**	**1 253**	**1 228**

Source: Milk Producers' Organisation (MPO), as reported in Lacto Data 2019

Raw milk, which is not homogenous in its protein, solids and fat content, is the main input into a wide range of processed dairy products broadly categorised into liquid milk products (including processed/pasteurised fresh milk, long-life or UHT milk, flavoured milk, yoghurt, cream and maas) and concentrated milk products (including butter, cheese, whey, condensed milk and milk powder). The processing or secondary level of the value chain is concentrated, and although there are around 130 processors, only 5 or 6 processors dominate most sales at this level. These are large multinational companies like Parmalat, Nestlé and Danone, as well as large local companies like Clover, Woodlands and Coega that supply nationally. There is also a growing number of processors that operate provincially or regionally, and that are beginning to supply more than one region. These can be categorised as medium-sized processors.

The large and medium-sized processors typically have their own sophisticated distribution and logistics networks that collect raw milk from farmers following the abolition of public bulk collection facilities, and that distribute final products to retail store networks. Efficient logistics and distribution systems are critical for competitiveness given the perishable nature of dairy products. These players typically have state-of-the-art plants that meet high food safety and hygiene standards, and the large players further have private collection points located throughout the country. There are also toll-manufacturing relationships between processors in the form of joint ventures and exclusive offtake agreements.

There is considerable vertical integration, not just between the larger processors and logistics and distribution infrastructure, but with dairy producers entering the processing level of the value chain through the establishment of their own milk processing plants. This 'producer-distributor' model includes farmers that have processing facilities on their farms and who sell their own produce to retailers and consumers. The levels of technological and operational sophistication of these players vary widely. In 2019, there were an estimated 73 producer-distributors that operate on a smaller scale than the larger processors, and that service narrower, localised markets within the region that they produce milk. The distribution and numbers of these producer-distributors in the provinces over a 10-year period is given in Table 2, along with trends in the number of processors.

Table 2: Number of producer-distributors and milk processors per province as registered with Milk SA, 2011 - 2019

Province	Number of PDs							Number of milk processors						
	Jan '09	Aug '16	Apr '17	Jul '17	Mar '18	Mar '19	Aug '19	Jan '09	Aug '16	Apr '17	Jul '17	Mar '18	Mar '19	Aug '19
Western Cape	33	23	22	19	19	8	14	46	37	36	36	34	31	32
Eastern Cape	15	15	12	11	10	3	7	13	12	9	9	8	9	9
Northern Cape	11	9	9	8	7	6	4	3	2	1	1	1	2	2
KwaZulu-Natal	15	10	10	9	9	7	7	28	23	24	23	19	19	19
Free State	13	10	10	9	7	6	5	19	12	12	11	12	13	13
North West	7	3	3	3	2	3	1	16	15	14	13	12	11	11
Gauteng	37	25	21	20	19	18	17	34	38	38	37	37	37	38
Mpumalanga	17	9	8	8	10	7	8	4	7	6	6	6	3	4
Limpopo	22	7	8	8	9	10	10	6	4	4	4	4	4	4
Total	**170**	**111**	**103**	**95**	**92**	**68**	**73**	**190**	**150**	**144**	**140**	**133**	**129**	**132**

Milk processors refers to producers of processed milk and manufacturers of other dairy products.

Source: Milk SA, as reported in Lacto Data 2019.

Processed dairy products are sold to final consumers through retailers, both formal and informal. The formal retail space in South Africa is concentrated and dominated by a handful of large supermarket chains. The fringe of smaller independent retailers, both formal and informal, is supplied by buying groups, wholesalers and ‘cash and carry’s’. The large supermarket chains wield significant buyer power and closely control the prices, standards, requirements and trading terms in their relationships with suppliers generally and in the dairy industry specifically (das Nair, 2018).[1]

The supermarket chains however also offer opportunities for suppliers to access wider markets as they expand store numbers in their regional networks, particularly in the Southern African region. Through these chains, dairy products produced in South Africa are exported, in addition to the large processors exporting directly. Sales of dairy products through formal independent wholesalers and retailers, and into the informal market in rural or community areas, are not subject to the same quality and food safety requirements as in the formal supermarket chains. Of all milk sold, it is estimated that 96% is sold in the formal market, 2% is sold in the informal market and 2% is retained by producers for own use and for feeding calves (Who Owns Whom, 2019). Product sold to formal wholesalers and cash and carry’s also get sold through informal retail channels such as spaza shops.

The large players at the primary and secondary levels of the dairy value chain are well represented on issues of collective interest through a number of industry associations. Milk South Africa is the umbrella body that represents both producers and processors. The Milk Producers Organization represents producers of unprocessed or raw milk and the South African Milk Processors Organization represents processors and manufacturers. Both fall under Milk South Africa. These bodies support members through promoting and marketing milk products, providing R&D, skills development, training and capacity building, engaging and lobbying government, and providing access to information. These bodies also have transformation objectives that seek to create a more inclusive dairy sector with greater participation by previously disadvantaged black SME producers and processors. However, preliminary interviews with smaller processors suggest that, other

[1] See for instance the findings of the Competition Commission of South Africa, Grocery Retail Market Inquiry findings (2019). See also Ncube et al, 2016.

than the provision of information, the various industry organisations do not offer much support to SMEs in terms of meeting standards, developing skills and capabilities, accessing finance or entering markets. While there is some support for small producers through Milk SA, small processors do not appear to get much support from industry bodies.

3: Key challenges for participation of SME dairy processors

Preliminary interviews reveal that medium-sized processors that have a regional reach have remained resilient and have shown growth. However, they still face barriers to entry into new markets and expansion. For small processors, these barriers are substantially amplified and severely limit their ability to effectively participate in value chains.

Accessing good quality raw milk that meets the required hygiene and food safety standards is critical and can be a challenge for SME processors. This requires adequate cold chain systems and infrastructure from the farm to the processor, and technological capabilities at the farming level to continuously monitor, test, record and improve hygiene standards. While the large and medium-sized producers have access to private or internal facilities and resources to ensure the required quality in milk production, it is much more difficult for small producers to meet these standards. Government support in terms of extension and veterinarian services, as well as public testing facilities for producers has been highly inadequate and declining since liberalisation. This disproportionately affects small producers as larger producers can afford to source these services privately.

Significant capabilities are further required at the processing level to meet hygiene and food safety standards. Packaging, labelling and branding of processed products are also important. It is estimated that packaging costs represent approximately 17% of the cost of finished products (Ncube et al., 2016). The packaging for dairy products is either imported or is only available locally from two or three large packaging companies. The lack of competition in packaging contributes to higher production costs.

SMEs also have to compete with well-known and accepted brands of the multinational dairy processors, who have large economies of scale and scope and more resources at their disposal for advertising and promotions. These large processors continue to penetrate peri-urban and rural areas through the expanding supermarket chains. SME processors are in a much weaker position to negotiate favourable trading terms with the large supermarket chains, resulting in a squeeze of their margins. This is evident from interviews conducted which clearly reveal that small and some medium-sized processors deliberately avoid the formal supermarket chains as routes to market given the difficulties in dealing with them. The buyer power of the large supermarket chains has indeed been a subject of the recent investigation by the Competition Commission of South Africa it its Grocery Retail Market Inquiry. Findings of the inquiry showed that suppliers selling to supermarket chains face difficulties in negotiating trading terms such as rebates, payment terms and return policies.

Other key challenges faced by SME processors include lack of access to finance and adequate support from government. While there are pockets of funding available from the Department of Agriculture, Land Reform and Rural Development, the Land Bank, the Department of Trade and Industry including through the Industrial Development Corporation and the Department of Small Business Development, it is often complicated and onerous for SMEs to access this finance. The support from these different government departments is also not coordinated towards a common objective of increasing participation of SMEs and historically disadvantaged individuals. Only recently has government started approaching support programmes in general as a 'package' of support that includes both financial and other forms of support that simultaneously address multiple barriers to entry and expansion in value chains. Some of this support has been directed to the dairy sector. A lack of skilled workers is also a concern for SMEs.

Despite these barriers, preliminary interviews and engagements with stakeholders highlight that there are opportunities for both small and medium-sized dairy processors to supply higher value products (like maas, cheese, flavoured milk, yoghurt and milk-based juices). There are opportunities for medium-sized processors to grow sales beyond their regions of processing, possibly nationally and to export into neighbouring SADC countries in these products. There are also opportunities for small processors to serve narrower local markets or supply within communities.

Less onerous access to supermarket chains and a diversity of retail channels can further facilitate participation of SME processors. The growth of house brands and private labels on supermarket shelves, and more localised procurement strategies of supermarket chains, provide opportunities for processors with smaller scale. Some medium-sized processors are already supplying house brands to supermarket chains. Alternative routes to market through wholesalers, cash and carry's and independent retailers are also very important for small processors. Ensuring fair competition between different formats of retailers is therefore critical and has been an area of focus for the Commission's retail inquiry. Recommendations from the inquiry have included lowering barriers to entry for independent retailers and strengthening the enforcement of the Competition Act to ensure equal treatment by suppliers towards independent retailers and supermarket chains. Alternative routes to market for SME processors also include sales to school feeding schemes and other public procurement projects. These channels appear not to be utilised to their full potential.

Innovation and technological developments in testing, packaging, cold storage and logistics would allow for a wider range of better-quality dairy products to be produced and would support better access to all these markets for SMEs. This requires adequate support from the state, development finance institutions and industry associations.

References

Competition Commission of South Africa, Grocery Retail Market Inquiry Final Report. 2019. Available here.

das Nair, R. 2019. The spread and internationalisation of South African retail chains and the implications of market power. *The International Review of Applied Economics*, 33(1): 30–50.

Lacto Data, Vol 22, no 2. November 2019.

Ncube, P., Nkhonjera, M., Paramoer, T., & Zengeni, T. 2016. Competition, barriers to entry and inclusive growth: Agro-processing. Centre for Competition, Regulation and Economic Development Working Paper 3/2016.

Quantec database, available at https://www.quantec.co.za/easydata/

Quarterly Employment Statistics, StatsSA, available under 'Additional download(s)' at http://www.statssa.gov.za/?page_id=1854&PPN=P0277

Who Owns Whom. 2019. Manufacture of Dairy Products, SIC code 3020, April 2019.

ES/S0001352/1

www.iiap.info