

# A self-sufficient skills development system in the sugarcane growing and milling sector in KwaZulu-Natal

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LABOUR MARKET  
INTELLIGENCE PARTNERSHIP

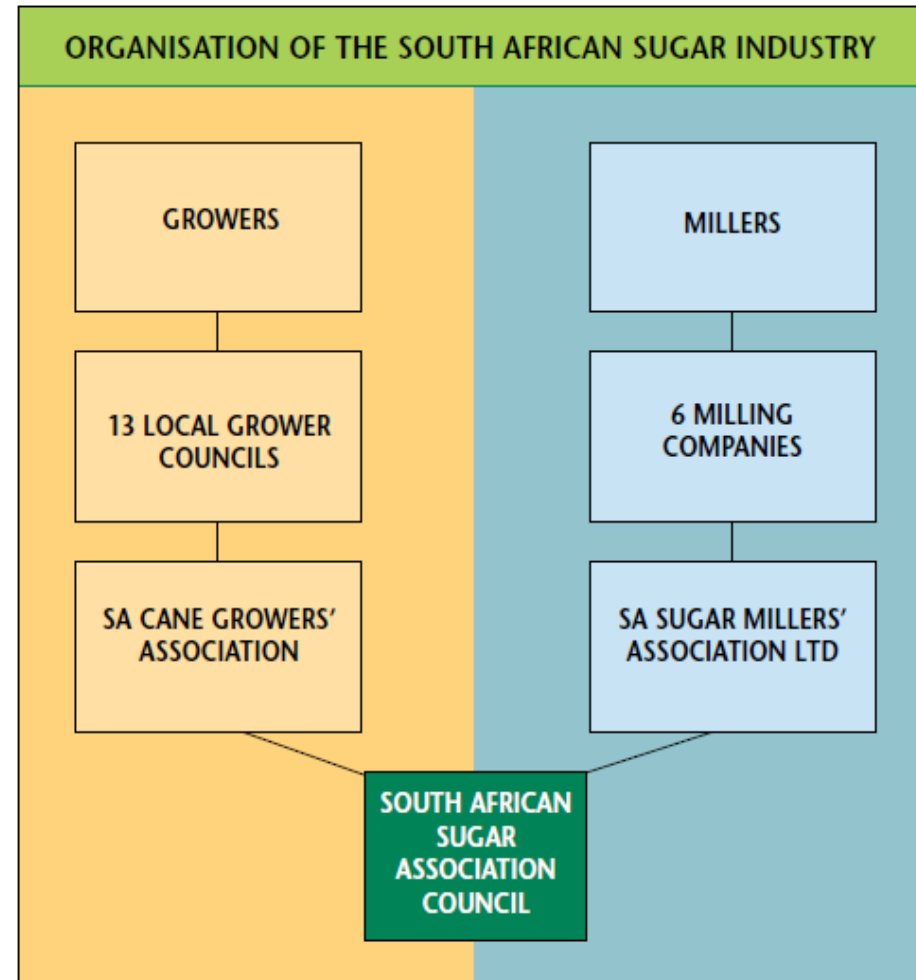


Source: SASA 2013

# South African sugar industry: Focus on sugarcane milling and growing



- Case study focus: sugarcane growing and milling segments
- History of self-regulation
- Excellent export infrastructure
- World-renowned agricultural and industrial research platforms
- A well-organised sector from grassroots levels up



Source: SASA (2013)

# Developing a well-organised, self-sufficient skills development system



- In the late 1920s, 1930s, industry called for a more organised and systemic training system, especially for meeting intermediate skills needs (apprenticeships)
- The main private intermediaries (industry associations) were identified as most appropriate to assist in addressing this need
- Firms and private intermediaries worked together to come up with strategies for meeting skills needs

# Examples of sugar technology and applied chemistry

Initially, universities of technology (DUT and MUT) (then technical colleges) and UKZN were approached to offer qualifications needed in the industry. Typically, the lectures were delivered by staff at the private intermediaries

## **Sugar technology:**

- 1960s-1980s - Diploma/Certificate courses in Sugar Technology were offered by DUT and MUT (sugar industry invested in infrastructure at MUT to include engineering as one focus area)
- 1980s - courses were stopped - oversupply of sugar technologist graduates, students complained that the qualifications limited their movement to other industries, the courses were not as highly valued at milling companies as university degrees
- Solution - shorter, 3-week (later extended to 10 weeks) sugar technologist courses were offered by a private intermediary (SMRI) to university students and graduates in engineering

## **Applied chemistry:**

- 1970s-1980s - At UKZN, sugar-specific material was included in the curriculum to meet the need for skills in chemical process technology for sugar milling
- 1990s - courses stopped due to turbulence in political environment
- Private intermediaries (SASMAL, SMRI) are trying to start up these kinds of programmes again

# Current: A well-organised, self-sufficient skills development system for routine skills needs



Over time, industry and private intermediaries have developed the mechanisms and strategies for sugar-specific education and training that exist today.

**sugar-specific  
education and training**

FIRMS, PRIVATE INTERMEDIARIES, PRIVATE PROVIDERS (PUBLIC INTERMEDIARIES PROVIDE SUPPORT)

**generic qualifications  
(basic, foundational education and  
training)**

UNIVERSITIES, UNIVERSITIES OF TECHNOLOGY, AGRI COLLEGES  
(PRIVATE AND PUBLIC INTERMEDIARIES PROVIDE SUPPORT)

## Main mechanisms/strategies:

- Millers: Engineers in Training (EIT) programme, Apprenticeships, In-service training
- Growers: rely more on private intermediaries for addressing education and training needs
- Learnerships in agriculture (private training provider of a private intermediary )
- Formal and informal education and training (mainly short courses offered by private intermediaries)

## SKILLS DEMAND

### CANE GROWERS

1. 25 200 Small-scale farmers
2. 1 570 Large scale growers (83.2% of crop)
3. 4 sugar cane growing companies

### MILLERS IN KZN

1. Illovo Sugar (4)
2. Tongaat Hulett (4)
3. Tsb (1 in KZN, 2 Mpum)
4. Gledhow Sugar Company (PTY) (1)
5. Union Cooperative Limited (1)
6. Umfolozi Sugar Mill (1)

### PUBLIC INTERMEDIARIES

1. Dep of Agri & Environ Affairs KZN
2. DAFF
3. DHET
4. AgriSeta
5. MerSeta

## MECHANISMS/STRATEGIES

Org linkages  
(knowledge &  
experience)

Resources  
(e.g. bursary  
programmes)

Skills  
movement  
(graduates,  
upskilling)

### PRIVATE INTERMEDIARIES

1. SASA (incl. SASRI, Shukela)
2. SA Cane Growers Assoc
3. SA Sugar Millers' Assoc
4. SMRI

## SKILLS SUPPLY

### UNIVERSITIES

1. UKZN
2. U ZULULAND
3. MUT
4. DUT
5. Wits (Tongaat)
6. Pretoria
7. Stellenbosch

### FET COLLEGES

1. Coastal
2. Elangeni
3. Esayidi
4. Majuba
5. Mnambithi
6. Mthashana
7. Thekwini
8. Umfolozi
9. Umgungundlovu

### PRIVATE PROVIDERS

1. Shukela (STC)
2. AGB MATHE

### AGRICULTURAL COLLEGES

1. Cedara College of Agriculture
2. Owen Sithole College of Agriculture

Interpreting &  
implementing  
policy

IPAP

NGP

NDP

Policy

Sugar Act

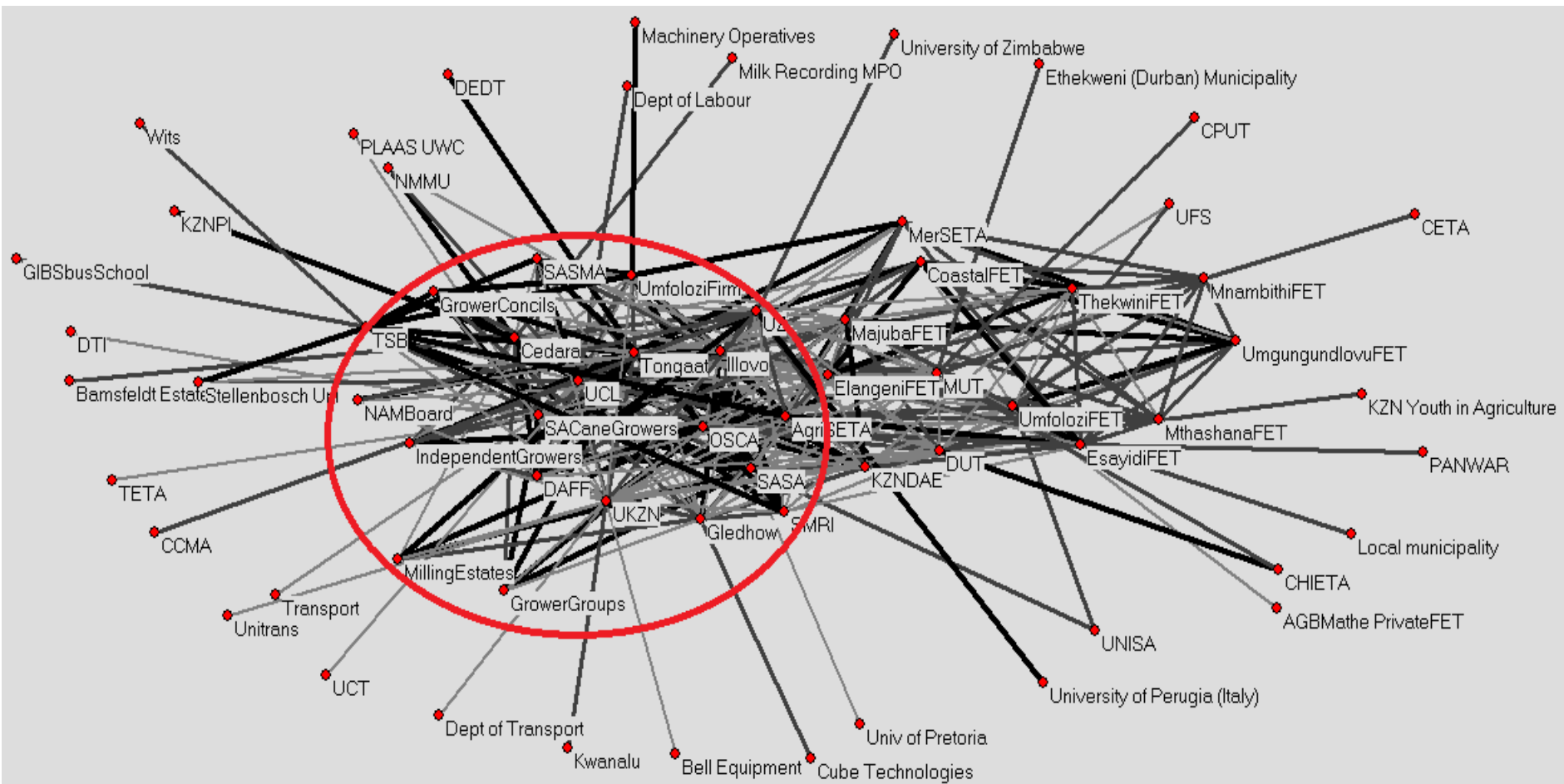
NSDS

Interpreting &  
implementing  
policy

## Skills development networks (mis/alignment)

## Dense core network:

firms, farmers, public and private intermediaries, universities, universities of technology and agricultural colleges (involved to an extent), public TVET (marginal)



# New challenges presenting dynamic skills needs

- Loss of skills - ageing population (need at supervisory level), competition from other industries, emigration
- Potential for development of new products and by-products (e.g. renewable energy)
- New entrants to sugarcane growing needing 'soft skills' and business management (co-operatives, land reform – due to policy promotion)

## **Other challenges:**

- Global sugar price is severely affected by subsidy-induced overproduction in some major sugar-producing countries
- Access to the major markets is further restricted by high tariffs and preferential trade
- Protecting their position in the domestic market and improve cost-effectiveness (need for import tariffs)

## **→ need for new collaborative arrangements**

## **Possible areas for intervention:**

- Public-private partnerships - government funding for private intermediaries and private providers to expand their expertise to function more effectively as the preferred providers of sugar-specific education and training?
- Build cooperative partnerships between public agricultural and TVET colleges, and private providers that have been functioning successfully? (requires colleges to build necessary capabilities - TVET could learn from the approach of the agricultural colleges)
- Build on previous university-private intermediary collaborations? (industry keen to revisit model)