FOOD & BEVERAGES MANUFACTURING SETA

SECTOR SKILLS PLAN

2022/2023

AUGUST

2021

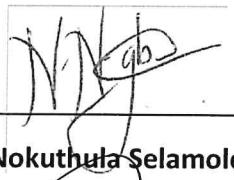
FoodBev SETA

Food and Beverages Manufacturing Sector Education and Training Authority

AUTHORISATION AND OFFICIAL SIGN-OFF

We, the undersigned, hereby certify that the draft Sector Skills Plan:

- Is developed by the management of Food and Beverages Manufacturing SETA, under the guidance of the Accounting Authority and in consultation with the Department of Higher Education and Training;
- Is informed by an extensive data analysis of sectoral primary and secondary research.
- Considers all the relevant policies, legislation and other mandates within the domain of the FoodBev SETA;
- Includes representative stakeholder consultations; and
- Accurately reflects the findings, in terms of occupational shortages and skills gaps, within the documented limitations, to inform strategy planning and performance priorities.



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Chief Executive Officer

Date: 02 August 2021

Mr. Alan Campbell

Chairperson

Date: 02 August 2021

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CHAIRPERSON'S FOREWORD

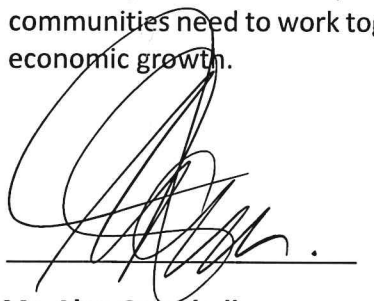
The Food and Beverages Manufacturing SETA (FoodBev SETA) is pleased to present its 2022/23 Sector Skills Plan (SSP). The SSP seeks to implement the National Skills Development Plan (NSDP), which came into effect on 1 April 2020.

The new SETA landscape re-establishes SETAs until 2030, extending the mandate to facilitate skills development and provide much needed stability to the sector. This key planning document is informed by research aimed at identifying skills needs (demand), supply of skills, opportunities, and constraints, in utilising and developing abilities aligned to the NSDP. It aims to fulfil performance outcomes set out by the Accounting Authority and the Department of Higher Education and Training (DHET).

The alignment of the SSP's objectives to those set out in the NSDP, reflect skills development needs identified within the food and beverages manufacturing sector, by presenting a comprehensive analysis of labour market trends, supply and demand dynamics, hard-to-fill occupations, and interventions that will be implemented by the SETA in response to skills needs. The impact of COVID-19 on the sector and its skills implication is significantly addressed.

The Sectoral Priority Occupations list ("SPOL") formerly known as Pivotal list has been updated from employer data through the analysis of Workplace Skills Plans (WSPs) and Annual Training Reports (ATRs). The SPOL is validated through qualitative methods, which were employed via virtual focus groups/ interviews and industry engagements (Chamber meetings).

Levy and non-levy employers, Higher Education Institutions (Universities), Technical Vocational Education and Training (TVET) colleges, Community Education colleges, private training providers, non-profit organisations, other SETAs, and rural and township communities need to work together towards achieving and sustaining a skilled workforce and economic growth.



Mr. Alan Campbell

Chairperson of the Board

Date: 02 August 2021

ACRONYMS

APAP	Agriculture Policy Action Plan
APP	Annual Performance Plan
ATR	Annual Training Reports
BCCS	Baking Cereals Confectionery and Snacks
DHET	Department of Higher Education and Training
DPSA	Disabled People South Africa
DTI	Department of Trade and Industry
ETQA	Education and Training Quality Assurance
EMIS	Education Management Information System
FAWU	Food and Allied Workers Union
FEDCRAW	Federal Council of Retail and Allied Workers
FMCG	Fast-Moving Consumer Goods
FoodBev SETA	Food and Beverages Manufacturing Sector Education and Training Authority
HEMIS	Higher Education Management Information System
HEI	Higher Education Institution
IPAP	Industrial Policy Action Plan
JSE	Johannesburg Stock Exchange
LSM	Living Standards Measure
MOU	Memorandum of Understanding
NGP	New Growth Path
NCV	National Certificate Vocational
NUFBWSAW	National Union of Food Beverage Wine Spirits and Allied Workers
OFO	Organising Framework of Occupations
PIVOTAL	Professional, Vocational Training and Academic Learning
QCTO	Quality Council for Trades and Occupations
RAAVC	Revitalisation of Agriculture and Agro-Processing Value Chain
SACB	South African Chamber of Baking
SAMPRO	South African Milk Processors Organisation
SAQA	South African Qualifications Authority
SETA	Sector Education and Training Authority
SIC	Standard Industrial Classification
SIPs	Strategic Infrastructure Projects
SP	Strategic Plan
SSP	Sector Skills Plan
SPOL	Sectoral Priority Occupations List
Stats SA	Statistics South Africa
TVET	Technical Vocational Education and Training

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EXECUTIVE SUMMARY

The core mandate of the Food and Beverages Manufacturing SETA is to promote, facilitate and incentivise skills development in the Food and Beverages Manufacturing sector. The development of the SSP for the FoodBev SETA has been compiled in accordance with the National Skills Development Plan (NSDP), the White Paper on Post School Education and Training (PSET), and the DHESI SSP Framework and Guidelines. The NSDP is aimed at improving access to occupations in high demand and priority skills aligned to supporting economic growth, employment creation and social development. The White Paper on PSET is concerned with a post-school system that is inclusive and addresses poverty, inequity, and targets the unemployed youth. The SSP aims to address the current occupational shortages and skills gaps. It is also concerned with facilitating the development of relevant skills and educational opportunities needed in the sector to decrease the identified skills gaps.

The 2022/23 SSP is compiled using a mixed method approach, which includes both quantitative and qualitative methods. During this process, the SETA considered the impact of the COVID-19 pandemic and its impact on skills development in the sector. The first phase of the SSP was based on desktop research entailing: document analysis; literature review; partial analysis of the WSP's/ATR's; economic indicators; review of change drivers; occupational shortages and skills gaps; partnerships and monitoring and evaluation. The second phase is based on the statistical analysis of data gathered from WSP's/ATR and PIVOTAL plans, a survey, interviews and virtual focus groups. A combined Chamber meeting was held to consult on the final SSP. The layout of the document is discussed in detail in the following paragraphs.

Chapter one presents the sector profile which includes economic analysis, employer profile analysis, employee profile analysis and economic trend analysis. The data is compiled from sector reports, Statistics SA (2010-2021), SARS and WSP/ATR data. These reports highlighted the following (2019): The total sector turnover is R522.7 billion; volume contribution to total manufacturing is 27.14%; gross value add is 22%; the manufacturing sector GDP contribution is 15.7%; and the food and beverages manufacturing sector trade surplus is R4.6 billion. The levy downloads (2020/21) highlight that there are 14 749 registered companies of which 4 285 (29%) are levy paying companies.

The sector is made up of employer companies distributed as follows: large companies 518 (4%), medium companies 628 (3%) and small companies 13 607 (93%). The distribution of companies per chamber is as follows: Food Preparation Products Chamber at 48%; Production, Processing and Preservation of Meat Fish, Fruit, Vegetables, Oils and Fats Chamber 30%; Manufacture of Beverages Chamber at 14.5%; Manufacture of Dairy 7%; and the Manufacture of Breakfast Products Chamber 0.5%.

The sector employs a total of 226 855 employees. The Food Preparation Products Chamber has the highest share of employees at 40%; Manufacture of Dairy Products at 23%; Production, Processing and Preservation of Meat, Fish, Fruit, Vegetables, Oil and Fats at 21.5%; Manufacture of Beverages chambers 15%; and Manufacture of Breakfast Products chamber at 0.25%. An analysis of the WSP indicates that large companies employ the bulk of the qualified employees (NQF 6 -10). The sector is male dominated representing 59% of the

workforce. White males are dominant at the manager level, but the number of African female managers increased by 5.4% in 2021 compared to 2020. Present trend of Africans occupying elementary occupations relative to management occupations continues. FoodBev SETA received a total of 786 WSP/ATR applications, with the Manufacture of Food Preparation Products Chamber submitting the highest applications at 50%. People with disability comprises 0.61% of total employed. Provincial distribution of companies indicates that Gauteng has the highest number of companies at 51%, followed by Western Cape at 35% and then KwaZulu Natal at 6%. Transformation has been identified as one of the priority actions that must be undertaken by the sector to redress socio-economic imbalances.

Chapter two outlines the factors that affect skills demand and supply through the identification of major change drivers in the Food and Beverages Manufacturing sector. The major change drivers include, amongst others, the impact of technological advancements, climate change, health and nutrition, and the impact of COVID-19 pandemic.

Chapter three reviews global literature on skills together with WSP and other data to understand the occupational shortages and skills gaps. It considers demand analysis, supply analysis, vacancy analysis, skills and occupations data and skills for the future to develop the sectoral occupations priority list. Data is gathered from desktop research, previous discretionary grants disbursements, WSP/ATR/PIVOTAL Plans analysis, global trends and forecasts, HEMIS, TVET and basic education data and primary data findings. A key extract of the 2019/20 WSP analysis is the need for professionals, related trade workers, and technicians and associate professionals. The chapter also discusses the supply side of skills and its impact on the sector, with the requirement of higher matric maths and science throughputs together with higher graduate enrolments and throughputs.

Chapter four covers partnerships between the SETA and public and/or private organisations. The FoodBev SETA has strategic partnerships with TVET colleges, food and beverages sector companies, international councils, public sector and universities. The SETA also has a partnership that is focused on the Fourth Industrial Revolution (4IR) and its impact on sector skills, and other partnerships that focus on skills development for people with disability, women, youth, non-levy paying companies, and those focused on rural development. The SETA intends to have a partnership with the Department of Labour and Employment for the implementation of the Temporary Employers Relief Scheme (TERS) to provide required skills to companies impacted by the COVID-19 pandemic.

Chapter five focuses on the progress made by the SETA on the implementation of M&E activities. This chapter reflects on the monitoring and evaluation of the SETA performance; skills development interventions; the model used to monitor and evaluate the SETA's activities including the strategic priorities; and highlights the plan of action going forward.

Chapter six provides a summary of the key findings of the SSP and recommended actions. The main findings of the SSP are:

- Addressing skills shortages: Increase the interventions from FoodBev SETA through increased targets for the development of qualified artisans, professionals, managers and technicians.

- Undergraduate bursaries: Provide matriculants' with bursaries especially those that are directly linked to food and beverages manufacturing sector e.g. food science and technology studies and engineering as this feeds into the professional skills required and potentially into the skills of the future.
- Transformation: Increase the number of bursaries and other programs to African females in the sector. Increase support towards SMME's, women, youth, rural and community development. The SETA must have special grants aimed at addressing skills development of people with disabilities in the sector to augment their presence in the sector.
- Innovation: Climate change and COVID-19 has given rise to the adoption of innovative practices in food processing. The FoodBev SETA offers bursaries for Masters and PhD students (Doctoral) in Innovation and Research to assist in this regard and continues to engage in International and National Conferences/Seminars as well as Webinars.
- Skills Gaps: Implement Skills Programmes and Adult Education and Training interventions for employed learners that can address generic management skills, numeracy, literacy, 4IR, health and safety (relating to COVID-19 pandemic), soft skills and industry specific knowledge and skills that have emerged as significant skills gaps in the sector.
- Career guidance: Conduct effective and efficient career guidance to young learners that highlight scarce occupations in the sector and showcase differences amongst them; and
- Support national priorities and plans: The FoodBev SETA will need to support national priorities by entering Memoranda of Understanding (MOU's) with relevant government departments and Institutes of Education and Training e.g. TVET's, HEI and CET colleges.

In conclusion this document highlights the research process followed in identifying the role players in the Food and Beverage Manufacturing Sector, and the skills that arise due to change drivers. It identifies and plans for the occupational shortages and skills gaps, hard-to-fill vacancies, sectoral priority occupations and the nature of supply within the Food and Beverages Manufacturing Sector. It further identifies the SETA partnerships that assist with delivering the FoodBev SETA mandate. The monitoring and evaluation process of the SETA strategic priorities and projects is reflected upon. Lastly, it concludes on the key areas of the SSP and recommendations. All the identified skills and plans are aligned to the relevant National legislation and plans guiding the FoodBev SETA.

RESEARCH PROCESS AND METHODS

This section details the research process utilised for the development of the 2022/23 Sector Skills Plan (SSP). Various research processes, methods, and analysis of input material are utilised in the development of the SSP. The research methodology adopted is a mixed method approach which integrates both qualitative and quantitative methods. A mixed methods approach supplements the main source of data, which is the WSP /ATR dataset triangulated with other sources. Other sources include surveys, SETA research studies, literature reviews, databases, meetings, and virtual interviews and focus groups with stakeholders. All data is collated, analysed, and interpreted. The findings from the various processes are then used for skills development action plans to identity and address priority skills.

The methods of data collection for the development of this SSP included:

- Review of global literature and existing SETA reports including tracer and impact studies. Including an analysis of 2020/21 WSP/ATR data, surveys, and economic and labour trends as reported by Statistics SA.
- Other input data including virtual focus groups and interviews with industry experts, employers and service providers, engagement with FBS management, engagement with the Chambers, the Governance and Strategy Committee and the Accounting Authority. The overall population for the focus groups and survey is the entire database of the SETA.

To verify the Sectorial Priority Occupations list, virtual focus groups and interviews are conducted with sector industry experts and through Chamber engagements. The sectoral occupations identified are compared to priority occupations identified in the literature review and the DHESI list. The list is verified to ascertain whether the identified occupations are linked to any change drivers in the sector. This is verified against the national priorities and strategies. The top 10 Hard to Fill Vacancies is established as a collective of the HTFV from all chambers and the quantitative processes.

Below is a summary of each FoodBev SETA research study that informed the SSP:

Table 1: Research that informed the development of the SSP.

Research Topic	Nature (Design) of the study	Objective of the Study	Data Collection Tools	Sample Size and Scope	List of Data Sources and Dataset	Timeframe
ANALYSIS OF THE IMPACT OF COVID-19 ON THE FOOD AND BEVERAGES MANUFACTURING SECTOR	Quantitative and Qualitative	The study provides insights into the impact of COVID-19, assimilations and responses in the South African Food and Beverages Manufacturing sector.	• Online surveys • Virtual focus groups and interviews • Desk top research	The study included a total population of 11 000 companies, of which 93% (10 230) are SMEs.	SARS Levy Database	May 2020 – September 2020
TVET STUDY: IMPACT & READINESS	Quantitative and Qualitative	The objective of the study is to investigate the key insights relating to the TVET system in the Foodbev sector, identify potential SETA mediated strategies to mitigate obstacles to the objectives of the TVET system in the sector and evaluate the impact of these strategies on the growth of new businesses.	• Desktop research • Research questionnaire • Factor analysis (used as data collection point for modelling). • Development of an SD model to predict scenarios.	A total population of 13 987 was determined of which: • Sample size of 2 628 company representatives was determined	SARS Levy Database	December 2020 – March 2021
SME SUSTAINABILITY AND DEVELOPMENT	Quantitative and Qualitative	Predict the impact of Driver, Enablers, and Barriers on the sustainability of SMEs through each stage of the SME lifecycle	• Online questionnaire • Desktop research • Data analysis including factor Analysis. • Development of an SD model to predict scenarios.	The total population was 13 067 and determined a sample of: • 205 Small companies	SARS Levy Database	April 2020 – November 2020
IN SEARCH FOR SUSTAINABLE YOUTH SKILL DEVELOPMENT STRATEGIES AND ENABLING SUPPORT MECHANISMS FOR SOUTH AFRICA	Quantitative and Qualitative	The main objective of this research was to investigate sustainable strategies for skills development, specific to youth, in the South African (SA) context.	• Online questionnaire • Desktop research • Data analysis including factor. • Development of an SD model to predict scenarios	The total population size was 2000 grant recipients and 2000 SMEs in the food and beverages manufacturing sector. • A sample size of 420 was determined (205 of SMEs and 215 grant recipients)	SARS Levy Database & Learners Database	April 2020 – November 2020
SKILLS OF THE FUTURE: DIGITAL PREDICTIVE FRAMEWORK	Quantitative and Qualitative	The key overall objective is to provide a critical analysis of global approaches to predicting skills of the future with a South African contextualized instrument.	• Data Analysis, Statistics, • Quantitative Analysis, • Predictive Models	This research conducts a qualitative and quantitative analysis of current global best practice methodologies and resultant data.	NA	December 2020 – February 2021

CHAPTER ONE: SECTOR PROFILE

1.1 INTRODUCTION

This chapter provides an overview of the Food and Beverages Manufacturing (FoodBev) Sector. Both qualitative and quantitative methods are used in this chapter. Data collection tools for the development of this chapter includes literature review of the sector; the analysis of 2020/21 WSP/ATR data; Quantec data, SARS data; economic and labour trends as reported by Statistics SA; SETA existing reports; interviews with industry experts and virtual focus groups with sub-sector industry experts; engagement with senior management; engagement with Chambers; and Governance and Strategy Committee and Accounting Authority. Literature on COVID-19 is also reviewed. The chapter is divided into four sections, namely: the scope of coverage, particularly in relation to the FoodBev stakeholders and key role players in the sector; economic performance; employer profile; and finally, the labour market profile (race, gender, age and disability).

1.2 SCOPE OF COVERAGE

Companies that are registered with the Food and Beverages Manufacturing SETA only include those with activities that fall within the secondary level of the food industry value chain which are mainly food processing. The processing of food includes the transformation of raw ingredients (input) by physical or chemical means into food, or the transformation of food (intermediate goods like sugar) into other forms. Food processing also includes the mixture of raw food ingredients to produce marketable food products that can be easily prepared and served to the consumer.

The manufacturing sector is vital to the country and one of the largest contributors to the GDP in the fourth quarter of 2020 (Statistics SA, 2021b). The manufacturing industry represented 21.1% increase of manufacturing in the fourth quarter of 2020 contributing 2.4 percentage points to the GDP growth. The food and beverage sector was one of the largest contributors to the increase in manufacturing(Statistics SA, 2021b). Food and beverages manufacturing is a core economic activity in South Africa, with a volume contribution of 27.14% to the total manufacturing activity (Statistics SA, 2021c). The food and beverages manufacturing employee numbers decreased from 256 344 in 2019/20 to 246 616 in 2020/21 (SARS, 2021). The sector has its supply chain linkages ranging from primary producers, through processing and logistics, to the domestic retail sector and exports. In addition to contributing to a significant trade surplus (R4.6 Billion), FoodBev is an important provider of business opportunities especially to small micro medium size enterprises, and employment(Deloitte, 2016).

The sector is part of the food industry value-chain comprising a range of activities including:

- Food production – Includes farming and production of raw agricultural produce.
- Food processing – Includes production, processing and preserving of raw and processed produce into finished products.
- Food distribution – Includes the distribution and retailing of finished products.
- Consumer – Customer of the final processed food

Companies operating within Food and Beverages Manufacturing Sector are grouped according to their industrial activities namely:

- The production, processing and preservation of meat, fish, fruit, vegetables, oil and fats

- Manufacture of dairy products
- Manufacture of breakfast products
- Food preparation products
- Manufacture of beverages

The Food and Beverages Manufacturing Sector comprises different industries as indicated in the Standard Industrial Classification (SIC) codes framework of South Africa Seventh Edition (2012). These include production, processing and preservation of meat, fish, fruit, vegetables, oil and fats, manufacture of dairy products, manufacture of breakfast products, food preparation products and manufacture of beverages as Gazetted by Department of Higher Education and Training. The sub-sectors are assigned Standard Industrial Classification (SIC) codes that are categorised further into the constituents detailed in Table 2.

Table 2: Constituents of the Food and Beverages Manufacturing Sector

Category	SIC Code	Constituency
301	**Production, processing and preservation of meat, fish, fruit, vegetables, oil and fats**	
	Meat Industry	
	30110	Production, processing and preserving of meat and meat products
	30112	Manufacture of prepared and preserved meat including sausage
	30113	Production of Lard and other edible fats
	Fish industry	
	30120	Processing and preserving of fish and fish products
	30121	Manufacture of canned, preserved and processed fish
	Fruits and vegetables industry	
	30130	Processing and Preserving of Fruits and Vegetables
	30131	Manufacture of canned, preserved, processed and dehydrated fruits and vegetables and potato flour meals
	Oils and Fats industry	
	30140	Manufacture of vegetables and animal oil and fats
	30141	Manufacture of crude oil and oilseed cake and meal
	30142	Manufacture of compound cooking fats, margarine, and edible oils
302	**Manufacture of dairy products**	
	Dairy Industry	
	30201	Processing of fresh milk (pasteurised, homogenous, sterilised, and vitamin)
	30202	Manufacture of butter and cheese
	30203	Manufacture of ice cream and other edible ice, whether containing cream or chocolate
303	**Manufacture of breakfast products**	
	Grain mill industry	
	30312	Manufacture of breakfast products
304	**Food preparation products**	
	Baking industry	
	30401	Manufacture of bakery products
	Confectionary industry	
	30430	Manufacture of cocoa, chocolate and sugar confectionary
	30491	Manufacture of coffee, coffee substitutes and tea
	Snacks industry	
	30492	Manufacture of nut foods
	Other food products industry	

Category	SIC Code	Constituency
	30440	Manufacture of macaroni, noodles, couscous and similar farinaceous products
	30490	Manufacture of other food products N.E.C.
	30499	Manufacture of spices, condiments, vinegar, yeast, egg products
305	**Manufacture of Beverages**	
	Wine and Spirits industry	
	30510	Distilling, rectifying, blending of spirits, ethyl alcohol production from fermented materials, manufacture of wine
	Beer and Malt industry	
	30520	Manufacture of beer and other malt liquors and malt
	30521	Breweries except sorghum beer breweries
	30522	Sorghum beer breweries
	30523	Manufacture of malt
	Soft drinks and water industry	
	30530	Manufacture of soft drinks, juices and juice extracts and production of mineral water (both carbonated and non-carbonated)

Source: (DHET, 2010)[1]

1.3 KEY ROLE PLAYERS IN THE SECTOR

There are several public and private key role players in the Food and Beverage Manufacturing Sector. These role players include trade unions, industry bodies, national government departments, employers, institutes of higher education and sector representatives amongst others. Below is a summary of the major role players in the sector.

Table 3: Key role players in the industry

Type of Organisation	Name of Organisation	Role in relation to NSDP
Government Department	Department of Higher Education and Training (DHET)	DHESI promotes and monitors the implementation of National Skills Development Plan. It is also responsible for developing and implementing appropriate legislation and policies for a quality and accessible post-school education and training systems. DHESI is also responsible for the distribution of levies to SETAs.
	Department of Agriculture, Forestry and Fisheries (DAFF)	Provide timely and updated economic information regarding the food and beverages industry to monitor its performance and provide insight into the effects of economic policies and exogenous factors on the industry.
	South African Revenue Services (SARS)	Collects levies as stipulated in the Skills Development Levies Act.
Trade Unions	Food and Allied Workers Union (FAWU)	Unions in the SETA context address the NSDP outcome 7. Unions in the SETA context advocate for the skills of the employees they represent, working with employers to improve the quality, quantity and equity of training. Unions help in designing schemes, where the focus is on training to help remedy skill or knowledge gaps; and ensure appropriate training then takes place.
	Federal Council of Retail and Allied Workers (FEDCRAW)	
	National Union of Food Beverage Wine Spirits and Allied Workers (NUFBWSAW)	

[1] The Food and Beverages Manufacturing Chambers and industries have been updated to align with the 2010 DHET gazette.

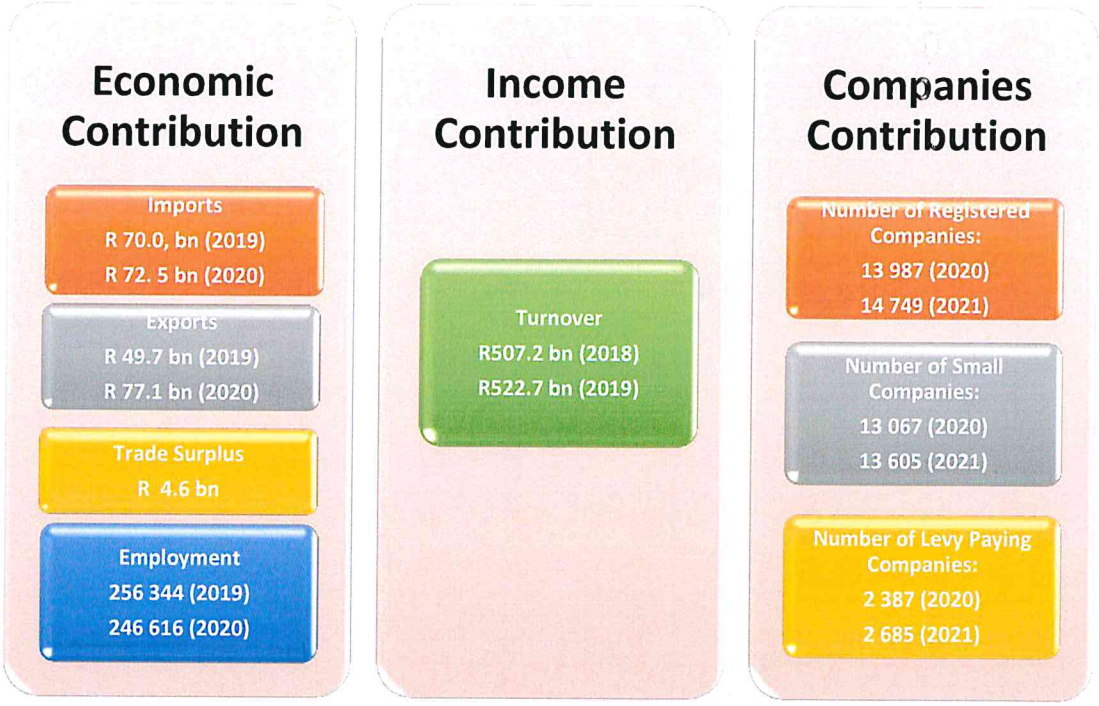
Type of Organisation	Name of Organisation	Role in relation to NSDP
Employers	Levy Paying Non-levy Paying	Skills levy institutions will play a crucial role in addressing NSDP Outcome 7. The role of employers is primarily to finance skills development in a collective manner (i.e., via the levy system) and to recognise the role of skills and training within the sector and more widely in the national economy. Employers work with their respective SETA to reclaim levy payment through engagement in certain required skills development activities.
Public Education Institutions	Community Education Colleges (CET) Technical Vocational Education and Training (TVET) Universities and University of Technology	Educational institutions support the growth of the public college system (Outcome 5) and linking education and the workplace (Outcome 2). Educational institutions equip labour market entrants with skills and competencies required occupations or trades. They also increase the stock of human capital within the segment of the educational system that directly address skills gaps in the sector.
	Industry Associations	
Confectionary	South African Sugar Association South African Bee Industry Organisation	Industry associations play a key role in supporting and encouraging worker training initiatives (NSDP Outcome 7). Industry associations identify strategic training objectives of the sector and contribute towards the identification of accurate training priorities for the sector. The associations serve as a link between industry, government, and the public. They provide a unified voice on legislative and regulatory matters.
Baking	The South African Chamber of Baking (SACB) Bread Baking Association of South Africa (BBASA) African Milling Association	
Fruits & Vegetables	SA Fruit and Vegetables Canners Association (SAFVCA) Dried Fruit Technical Services SA Fruit Juice Association Potatoes South Africa South African Mushroom Farmers Association South Africa Garlic Growers Association Potatoes and Union Committee	
Fish	South African Abalone Council South Africa Deep-Sea Trawling Industry Association The Aquaculture Association of Southern Africa West Coast Rock Lobster Association South Coast Rock Lobster Industry Association South Africa Pelagic Fish Industry Association South Africa Patagonian Tooth-fish Association	
Dairy	Milk South Africa (MSA) The South African Milk Processors Organisation (SAMPRO) Milk Producers Organisation of South Africa (MPOSA) Dairy Standard Agency (DSA) Eastern and Southern Dairy Association	
Meat	Red Meat Industry Forum SA Ostrich Business Chamber Game Abattoir and Meat Exporters of South Africa (GAME SA) South African Pork Producers Organisation SA Ostrich Business Chamber South Africa Poultry Association	
Grain Mill	National Chamber of Milling Grain South Africa	
Wine & Spirits	Wine Industry Network of Expertise and Technology (WINETEC) Wines of South Africa (WOSA) SA Wine Industry Transformation Unit SA Wine Industry Information and Systems (SAWIS)	

Type of Organisation	Name of Organisation	Role in relation to NSDP
	VINPRO Sustainable Wine South Africa (SWSA) Wine and Agricultural Ethical Trade Association (WIETA	
Beer & Malt	The South African Liquor Brand Owners Association (SALBA) South African Brandy Foundation South African Liquor Traders Association (SALTA) Sorghum Trust Beer Association of South Africa Craft Beer Association South Africa	
Soft Drinks & Water	South African Rooibos Council South African Honey Bush Tea Association Beverage Association of South Africa (BEVSA) South Africa National Bottled Water Association	
Oil and Fats	SA Olive Associations SA Oil Pressers Association South Africa Essential Oils Producers Association South African Soy food Association	
Snacks	Groundnut Processors Association South African Pecan Nut Association	
Other Food Products	South African Association of the Flavour and Fragrance Industry	

1.4 ECONOMIC PERFORMANCE OF THE SECTOR

This section focuses on the Food and Beverages Manufacturing Sector's contribution to the broader economy. It is important to identify key economic indicators that affect the performance of the Food and Beverages Manufacturing sector. The Gross Domestic Product (GDP), export and imports are amongst the central indicators within the sector. The section also reports on other indicators such as inflation. Figure 1 provides a sector snapshot for 2019 to 2020. The data is further analysed in this chapter.

Figure 1: The Food and Beverages Manufacturing Sector Snapshot (19/20 and 2020/21)

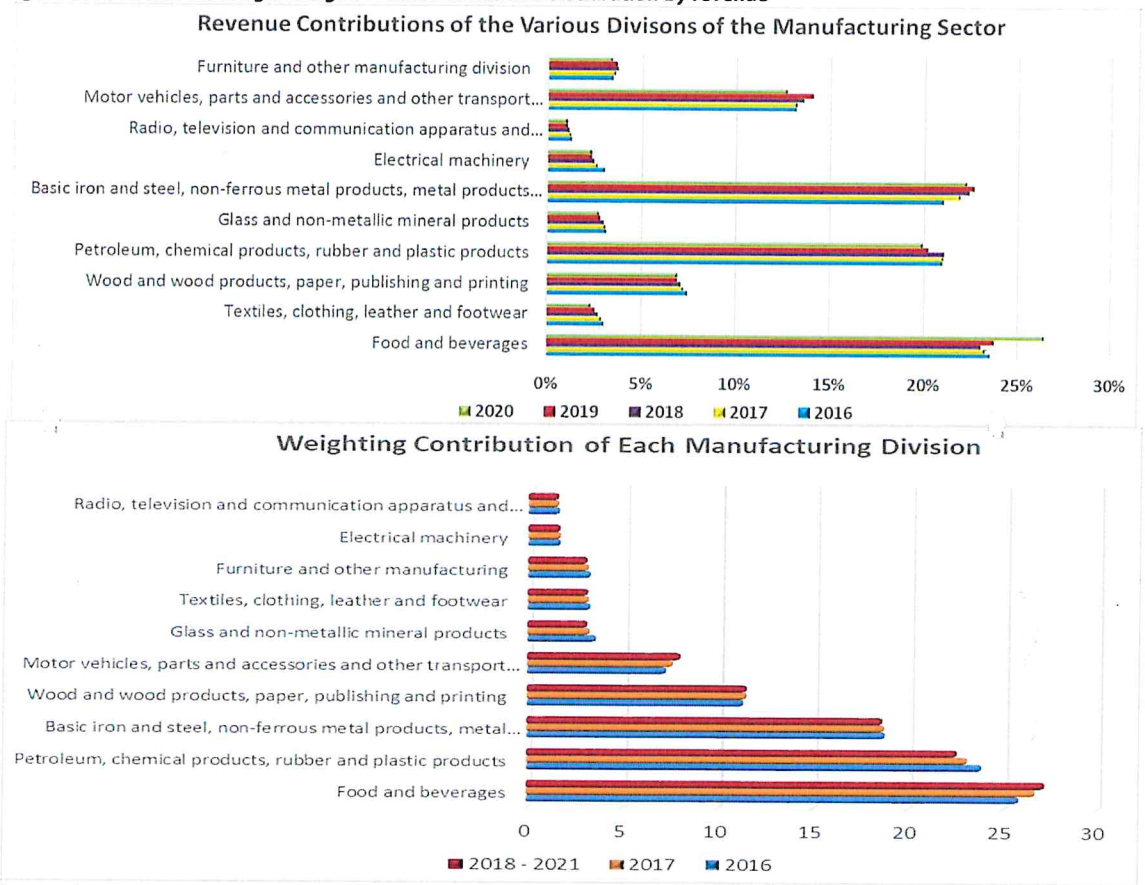


Source: (SARS, 2021)

1.4.1 Overview of Key Economic Indicators

The Manufacturing sector in SA comprises 10 contributors as illustrated in Figure 2. The FoodBev sector is the largest contributor to revenue in the manufacturing industry. From 2016 -2019 the Food and Beverage Manufacturing contribution was fairly steady from 23.01 to 23.76% of manufacturing revenue but increased to 26.42% in 2020. It is the only manufacturing sector to have increased significantly. It is the largest weighted contributor to the manufacturing industry at 27.14%, 0.5% up from 2019 (Statistics SA, 2021c). Food products such as citrus, grapes, wine, apples and pears, nuts, sugar and fruit juices boosted South Africa's trade performance in 2020 (Sihlobo, 2021). Driven by the rise in population, the demand for food and beverages is expected to increase in coming years (Fukase & Martin, 2020).

Figure 1: Food and Beverages weighted contribution and distribution by revenue



Source: (Quantec, 2021; Statistics SA, 2021c)

1.4.2 COVID-19 within the Food and beverages Manufacturing Sector

The Food and Beverages Manufacturing sector is a crucial sector of the South African economy as it plays a key role in meeting society's vital needs. Covid-19 has already had global effects, with significant economic implications across all regions. The Food and beverage sector experienced significant disruptions in the global and local food value chains (Chowdhury et al., 2020). The pandemic impacted both global and local supply chain which led to disruptions in supply chains. According to companies interviewed, the disruption ultimately led to companies paying higher prices for raw materials which translated into higher prices for consumers.

In March 2020, the national government declared a state of national disaster, with extensions of the state of disaster continuing into 2021 with continued efforts to contain the spread of COVID-19 variants. A year into COVID-19, companies interviewed explained that because they were clustered as essential services, a lot of companies continued to operate but under very different conditions (Food and Beverage SETA, 2021a). Despite it being part of the essential service during hard lockdowns, the sector operated at a reduced capacity. Stakeholders' interview reported that companies also had to deal with the new culture of operations and the overworking of some employees due to positive cases in the workplace. Participants commented on the new culture shift in the workplace with some employees working at home while others had to report to the factory floor. This created an atmosphere of an "us versus them" with employees who reported to work often feeling why they had to be in the office while others work from home. The culture of managing employees had to change and the transition from face-to-face managing to managing remotely remains a challenge for most companies (Food and Beverage SETA, 2021a). Secondly, the limited capacity for small to medium companies often resulted in closures of these companies (Zeidy, 2020).

According to (Chowdhury et al., 2020) prior to the outbreak, factors such as lifestyle patterns, rising per capita income, and a growing population have been the prominent growth-enhancing factors associated with the food sector. However, measures adopted by countries across the world including South Africa to stop the spread of the virus, have potentially changed the growth of the food and beverages industry. For many companies, understanding the risks associated with COVID-19 provided an opportunity to build resilience as they moved fast to adopt to disruptions while maintaining continuous business operations and safeguarding employees as well as customers (Food and Beverage SETA, 2021a). From a data perspective the WSP analysis indicates a decrease in lower-level jobs specifically sales and service workers. A brief discussion of the impact of COVID-19 on different sub sectors is provided below.

Impact of the COVID-19 pandemic on the different subsectors

Manufacture of dairy products

A comparative data analysis of Quantec data (2015 and 2021) indicates a 9% decrease in employment Q2 2020 with overall recovery of 5% since, with an average sector growth for previous 5 years (Q2) of 2.7%. This reveals a COVID-19 impact of some 6.3%.Like many other sectors of the economy, a review of literature indicates that the COVID-19 pandemic has had negative impact on the global milk industry 2020 (Wang et al., 2020). This was confirmed by stakeholders during interviews when they reported that the pandemic challenged dairy farmers and processors. Due to lockdown restrictions most of the companies in the dairy sector have come under the scale of high risk which have resulted in the reduction of total volume of sales of dairy products due to the disruption in consumption, production, and supply chain of raw milk, as referenced by (Sharma & Sinha, 2020; Wang et al., 2020). There has been a drastic fall in milk prices across Asian and European countries (European Commission, 2020).

The pandemic has affected the dairy industry in South Africa through mechanisms such as disruption and difficulties of moving milk within the supply chains, disruption in consumption patterns, worker shortages, increased production costs, and lack of operating capital (Food and Beverage SETA, 2021a). The disruption in consumption patterns was because of apprehension about consuming cold products such as ice cream, flavoured milk, and yogurt. The dairy sector has been hit particularly hard by this crisis because unlike other agricultural commodities, the products, particularly fresh milk, are highly perishable – raw milk cannot be frozen like meat, or put in a silo, like grain (Bowman & Das Nair, 2020). Also, the closure of hotels, restaurants and schools which buy dairy products in huge quantities contributed negatively to the performance of the sector (Nagurney, 2021). However, the sector is starting to experience growth with companies having rearranged their operations.

The production, processing and preservation of meat, fish, fruit, vegetables, oil and fats

A comparative data analysis of Quantec data (2015 and 2021) indicates a 4% decrease in employment Q3 2020 with overall recovery of 7.74% since, with an average sector growth for the previous 5 years (Q2) of 3%. This reveals a COVID-19 impact of some 1% but a strong recovery. The fishing industry in many countries is considered critical for food production and supply, however due to COVID- 19 the fishing industry faced the problems of disrupted supply chains and declining markets (FAO, 2020b). Participants from the sector argued that the sector was affected by the pandemic due to the loss of restaurant sales, disruptions in export markets and a decline in seafood prices. All these factors have stopped or reduced activity for many fishing fleets, as their work became unprofitable in many countries (FAO, 2020b). In South Africa, the export price of rock lobster had significantly declined with the closure of the Chinese fish market, which has impacted small-scale as well as large-scale fisheries (FAO, 2020b). To mitigate the spread of the pandemic, government, and the fish industry enacted measures to protect worker health as the pandemic continued. This included extra sanitation steps, issuing protective equipment during processing, and shifting to remote working where possible.

As the (International Labour Organisation, 2021) reports, the effects of the pandemic have rippled across the entire meat supply chain, from primary production (livestock rearing) to processing and retail, inevitably impacting businesses and workers engaged in it. In South Africa where processed meat is largely purchased in the retail food market segment (supermarkets, convenience stores, specialty meat shops, etc.) and used in restaurants and fast-food services, there was also a significant decline due to lockdown restrictions (Food and Beverage SETA, 2021a). However, with COVID-19 mitigation measures implemented, report by the South African Processed Meat market indicates that the sector is expected to witness modest growth at a compound annual growth rate (CAGR) of nearly 4% during 2020-2030 (Mordo Intelligence, 2021). An analysis of reports further indicates that the COVID-19 pandemic has had far-reaching implications within the fruit and vegetables supply chain (OECD, 2020). The crisis has had a huge impact on economies worldwide, and the demand for fresh fruit and vegetables has changed as consumers opt for food that safeguard their immune systems. This was validated by stakeholders when they reported that demand for healthy food in increasing (Food and Beverage SETA, 2021a). Due to the closure of restaurants, bars, and schools, produce growers and distributors were forced to shift supplies almost entirely from the foodservice to the retail channel (Richards & Rickard, 2020).

Manufacture of Beverages

A comparative data analysis of Quantec data (2015 and 2021) indicates a 9% decrease in employment Q2 2020 with overall recovery of 2.21% since, with an average sector growth for the previous 5 years (Q2) of 1.6%. This reveals a COVID-19 impact of some 7.4% with weak recovery.

The outbreak of COVID-19 has been affecting the companies operating in the alcoholic beverages industry negatively (Food and Beverage SETA, 2021a). The South African beverages industry is a major force in the South African economy, providing employment and income to thousands of households and making a substantial contribution to government tax revenue and export earnings for South Africa. However, the alcoholic beverage industry was the hardest-hit subsector in the food and beverages manufacturing sector when COVID-19 restrictions were introduced in the country. Companies experienced a significant decline in sales due to the prohibition of sales locally under the Disaster Regulations governing the national lockdown in South Africa, and the closed boarders during the initial lockdown. Some companies have reacted by halting of capital investments to mitigate the effects of alcohol ban (Jordaan, 2020). During interviews participants indicated that thousands of small businesses are mostly affected when total ban on alcohol sales is introduced by government (Food and Beverage SETA, 2021a). This resulted in business closures and loss in revenue for the fiscus while inadvertently affecting training and development in the sector as companies try to recover. An analysis of the data on employment reflects limited overall job losses but rather a shit to different roles.

Manufacture of Food Preparation Products

Globally, the COVID-19 virus has increased the demand for staple foods, healthy snacks, and baking goods (Hyslop, 2020). At the commencement of the lock down there was a higher-than-normal demand for staple foods but this stabilised as the country went through the restrictions (Mogues, 2020). According to participants, in the food preparation industry they could continue to manufacture core foods like rice, pasta, mealie meal, etc. Furthermore, consumers continued to consume more healthy snacks (dried fruit snacks, cereal and granola bars, meat snacks, nuts, and seed snacks) since the pandemic and were baking more to pass by time at home (Hyslop, 2020). This sector has been able to continue supplying the market despite adverse conditions.

Manufacture of Breakfast Products

The WSP data for this chamber is very limited. As the lockdown restrictions were in most parts of the world, the demand for breakfast products increased significantly as restaurants were shut down. According to participants this was largely driven by the increased demand for healthy breakfast cereals (Food and Beverage SETA, 2021a). As (Mordo Intelligence, 2021) argues, an increase in health awareness among people globally is making consumers increasingly prefer highly nutritious quick breakfast diets. With COVID-19 still ravaging South Africa, this sector is expected to experience growth.

1.4.3 Exports and Imports

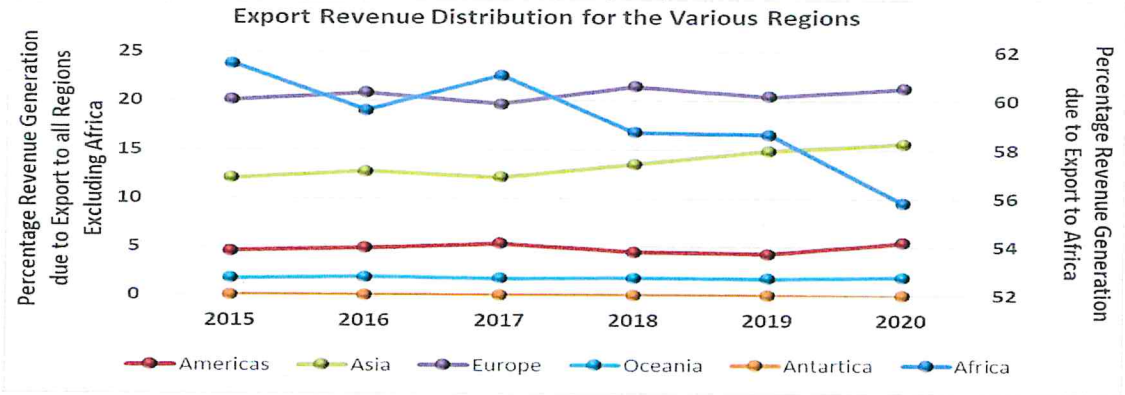
Recent research suggests that South Africa possesses a competitive advantage in a few food and beverages sub-sectors (Sihlobo, 2021). A closer look at data illustrates that between 2015 and 2020 South Africa has been experiencing an increase in trade in the food and beverages

sector but has been losing global market share. Although Covid-19 travel restrictions created some delays of food consignments subject to random inspection and sampling at point of entry into South Africa. Exports and imports remained robust in 2020 despite localised lockdowns across the country, indicating an increase in external and domestic demand for food and beverage products (Sihlobo, 2021). Products such as citrus, wine, apples and pears, nuts sugar and fruit juices were highly sought after in the export markets. According to (Sihlobo, 2021) the relatively weaker domestic currency made South Africa's products more competitive in the global market. In terms of imports, South Africa's imports have grown slower than its exports (Quantec, 2021). The imports were primarily underpinned by the growing demand for food ingredients from overseas suppliers by South Africa's larger food processing companies (Ntloedibe, 2021). Fruit juice manufacturers in South Africa import grape and apple juice to blend with their own fruit juices.

Looking at a broader picture, for the past six years, 2015 to 2020, Africa has generated the largest revenue from export, ranging from 62% (highest in 2015) to 56% (lowest in 2020) of total global export revenue, refer to Figure 3. However, Africa's revenue from exports is in decline, a 10% decline in export revenue is observed in 2015 from 2020 levels. The export revenue of Asia increased by 29% in 2020 from 2015 levels, whilst the export revenue of Europe increased by 6% in 2020 from 2015 levels. The reasons for this decline in export revenue may include lack of marketing of products to the global markets, change in demand of products, product specification not aligned to customer needs, pricing of products and delivery time of products. Another critical factor is digitalisation of the manufacturing industry, with Asia and Europe at the forefront. The identification of the reasons guides the skills requirement of the sector, improving sector performance, thereby increasing exports and revenue generation.

From a destination point of view, the graph below illustrates that Africa had a high share of food exports in 2015. However, the trend started shifting towards Asia as it gradually increases over the years due to an increase in food demand in Asia driven by demographic forces (i.e., increase in population). Fruit, beverages, vegetables and meat are some of the leading products exported to this region. Food consumption per person is expanding rapidly in Asian countries and this trend is expected to continue. (Fukase & Martin, 2020) argue that Africa and Asia are going to experience an increase in population by 2050. Therefore, the demand for food in these regions is going increase. With the demand for food expected to continue increasing, especially in Asia, understanding the future of the Asian demand for food is important if South Africa is to succeed in the rapidly evolving Asian markets. However, doing so will not be easy, especially taking into consideration the drought conditions and power cuts currently being experienced across large areas of South Africa that are severely impacting the food and beverages sector.

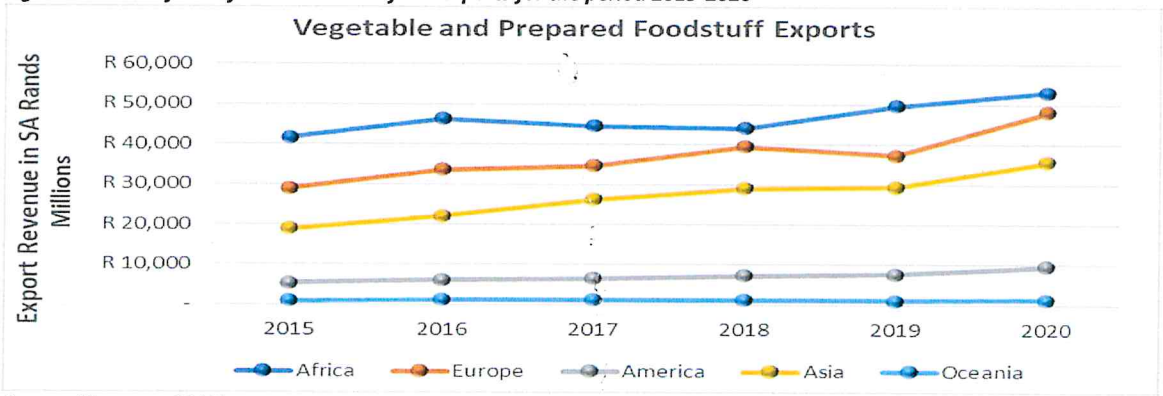
Figure 2: Food and Beverages continent specific financial returns for exports between 2015-2020



Source: (Quantec, 2021)

(Quantec, 2021) data indicates that the general trend is increasing in terms of vegetables and prepared food exports. In 2020 exports in vegetables and prepared food increased on average by 26% from 2019 levels for all regions expect Africa. Africa had a 7% increase in 2019 level. Figure 4 below indicates that exports into Asia have increased most significantly in terms of Rand value. Africa remains South Africa's largest market for exports of vegetables and prepared food. The revenue is not adjusted for exchange rates or inflation. The opportunity for growth is in Africa and Asia.

Figure 3: South Africa's financial returns from exports for the period 2015-2020



Source: (Quantec, 2021)

1.4.4 Other Economic Indicators

The reported annual CPI for March 2021 is 3.2%, a month on month increase of 0.7% (Statistics SA, 2021a). The Food and non-alcoholic beverages sectors were identified as one of the main contributors to the CPI, contributing 1% point to the total CPI annual rate of 3.2%. (Statistics SA, 2021a). Food and non-alcoholic beverages increased by 5.7% year on year (Statistics SA, 2021a). The food inflation rate has been on a decline over the months despite the rise in Value Added Tax (VAT) in SA.

(Rall, 2019) reports that the introduction of the Carbon Tax Bill and the continued hikes in fuel prices are impacting the food and beverages industry negatively, as 70.0% of South Africa's food is transported by road. The increase in fuel prices continues to increase the price of food and reduce the disposable income of consumers as unemployment continues to rise. The potential positive impact of the weaker Rand on exports is positive but with global supply chains under significant COVID-19 constrains this export potential may not realise. The

weaker rand may result in higher priced imports which could result in increased domestic food prices.

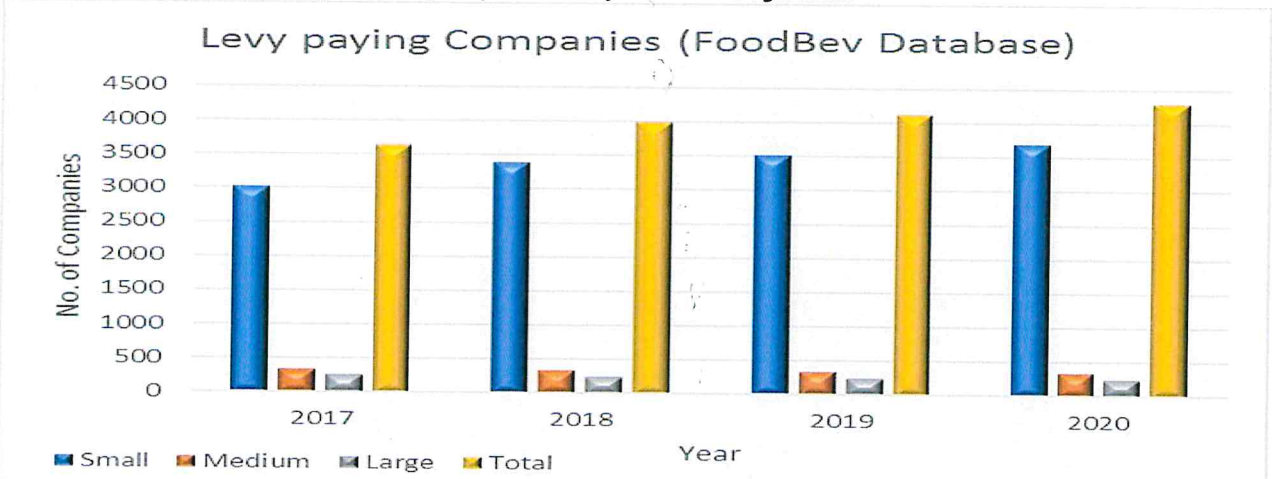
1.5 EMPLOYER PROFILE

This section evaluates: the number of registered employers in the sector and the sub-sectors; the company sizes; levy paying companies and geographical locations of companies.

1.5.1 Number of Registered Entities in the Sector

According to the SARS Levy Database (2021), the number of companies registered and classified under Food and Beverages Manufacturing Sector increased by 5.4% from 13 982 to 14 748 in 2021. The companies are classified based on size: small companies have less than 50 employees; medium companies have between 50 and 149 employees and large companies have greater than 150 employees (SARS, 2021). The small companies comprise 92% of the sector, followed by large companies at 3.6% and medium companies at 4.3%. All companies with an annual payroll of R500 000 and above are required to pay levies. The figure also indicates the levy trend over the last 4 years, this is extracted from the FoodBev SETA database as the SARS database has gaps, and indicates the number of levy-paying companies has increased. There is a discrepancy between the SARS (2685) and FBS Levy (4 283) databases and are not consistent with each other, making the validation process of the SETA levy paying companies difficult within this short time.

Figure 4: Size Distribution and levy analysis of companies in the food and beverages sector



	2020				2019				2018				2017			
	SARS Data		FBS Levy Database		SARS Data		FBS Levy Database		SARS Data		FBS Levy Database		SARS Data		FBS Levy Database	
	Totals	Levy Payers Identified	Totals	Levy Payers Identified	Totals	Levy Payers Identified	Totals	Levy Payers Identified	Totals	Levy Payers Identified	Totals	Levy Payers Identified	Totals	Levy Payers Identified	Totals	Levy Payers Identified
Small	13586	1669	3692	3692	12892	1467	3516	3516	11360	1282	3385	3385	11107	48	3030	3030
Medium	628	422	337	337	597	385	343	343	533	335	348	348	581	30	350	350
Large	534	594	254	254	493	535	253	253	439	460	254	254	478	157	257	257
Blank	-	12063	2	2		11595	-	-	3	10258	-	-	-	11931	-	-
Total	14748	14748	4285	4285	13982	13982	4112	4112	12335	12335	3987	3987	12166	12166	3637	3637

Source: (Food and Beverage SETA, 2021b) (SARS, 2021)

There are significantly smaller companies registered with the FoodBev SETA, indicating that the focus of skills interventions should be on SMME's. Part of the SETA's priority initiatives include developing the skills of small businesses (levy paying and non-levy paying) as they are a critical component of the sector. The COVID-19 pandemic has affected a number of jobs

and there is a need to focus on entrepreneurial development. The FoodBev SETA has introduced various programs for capacitating the skills of small businesses. There are challenges in that the identified SMME's would cancel the training before it starts or would not complete the program.

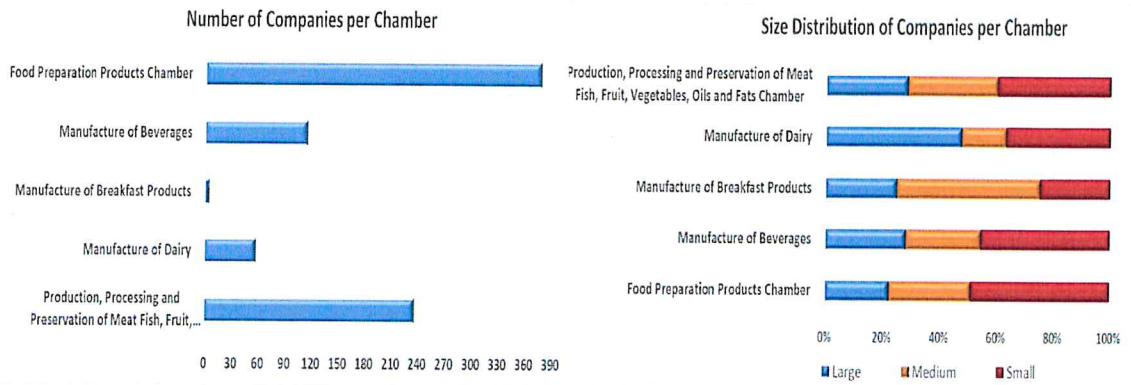


Figure 5: An Analysis of companies in each Chamber (WSP/ATR 2020/2021, 2021)***: B Analysis by company size*** (WSP/ATR 2020/2021, 2021) ***Source: SARS data 2020 does not contain the new chamber configuration.***

The distribution of companies among the five Chambers of the Food and Beverage Manufacturing Sector are analysed, with the Food Preparation Products Chamber having the largest number of companies(376) followed by the Production, Processing and Preservation of Meat, Fish, Fruit, Vegetables, Oil and Fats (235) and Manufacture of Beverages (114), as illustrated in Figure 6. There is a glaring underrepresentation of the Manufacture of Breakfast Products Chamber.

Overall the Food and Beverage Manufacturing Sector experienced an increase in number of companies returning WSP's from 728 in 2020 to 786 in 2021. The three largest chambers, in terms of number of companies, is comprised of mostly small companies; Food Preparation Products chambers 49% small companies, Manufacture of Beverages is 46%, and Production, Processing and Preservation of Meat, Fish, Fruit, Vegetables, Oil and Fats is 40%. Small companies have a significant presence. This reinforces the need to understand the low response rate of small companies to the SETA interventions as well as identification of the skills and other needs of SMME's. The skills need of small companies is critical, given their contribution to the Food and Beverage sector.

The data reflected in Table 4 provides for interesting insights on the data maturity, essentially three inputs are compared to identify data consistencies. The data from the WSP and FB Levy paying database reflects the highest consistency. The SARS database is the largest but some data cleansing is required prior to this database representing chamber distribution.

Table 4: Distribution of companies according to Chamber, Levy Payment and WSP/ATR Submissions

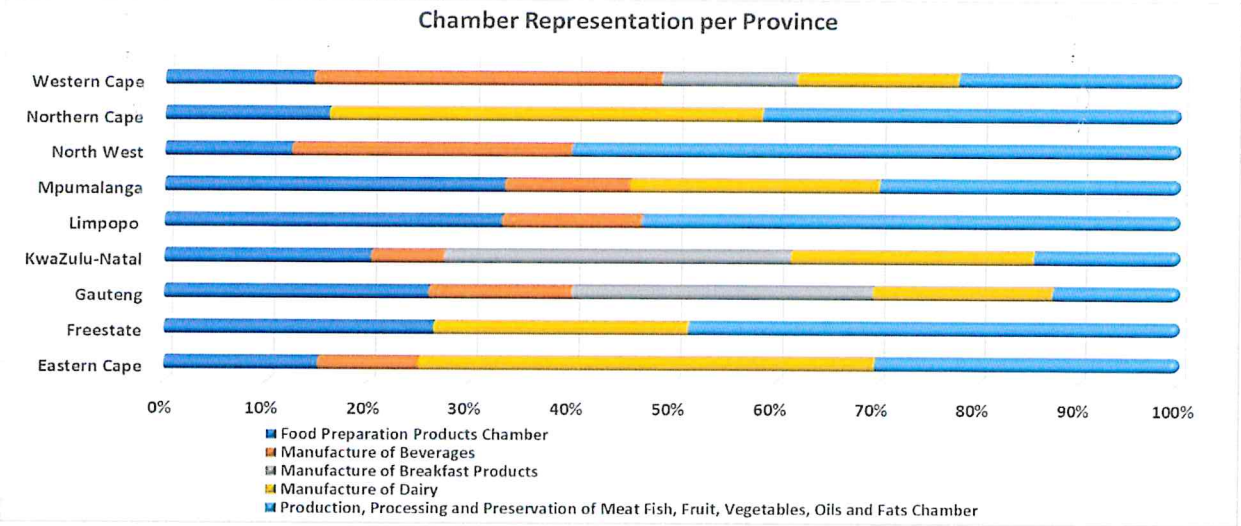
Chamber	No of Companies (SARS database)	Levy Paying (FBS Levy database	WSP/ATR Submission	No of Companies (SARS database)	Levy Paying (FBS Levy database	WSP/ATR Submission
Food Preparation Products Chamber	2475.00	1759.00	376.00	16.78%	41.05%	47.84%
Production, Processing and Preservation of Meat Fish, Fruit, Vegetables, Oils and Fats Chamber	1872.00	1047.00	235.00	12.69%	24.43%	29.90%
Manufacture of Beverages	961.00	416.00	114.00	6.52%	9.71%	14.50%
Manufacture of Dairy	199.00	142.00	57.00	1.35%	3.31%	7.25%
Manufacture of Breakfast Products	45.00	19.00	4.00	0.31%	0.44%	0.51%
No SIC Code on SARS or FBS levy database	8598.00	902.00	-	58.29%	21.05%	0.00%
Total	**14750.00**	**4285.00**	**786.00**			

Sources: (Food and Beverage SETA, 2021b; SARS, 2021; WSP/ATR 2020,2021)

1.5.2 Geographical representation of employers[2]

The provincial distribution of employers is skewed towards the country's economic hubs, mainly in the Western Cape (291 companies) and Gauteng (261 companies). Figure 7 illustrates the distribution of the various Chambers across the nine provinces. KZN/GP and WC have all chambers represented. With the manufacture of breakfast products absence in all other provinces. Dairy has a strong presence in the eastern and Northern Cape. The Production, Processing and preservation of Meat Fish, Fruit, Oils and Fats Chamber has a high presence in the North West Province.

Figure 6: Provincial distribution of companies per Chamber



Source: (WSP/ATR 2020/2021, 2021)

1.6 LABOUR MARKET PROFILE OF THE SECTOR

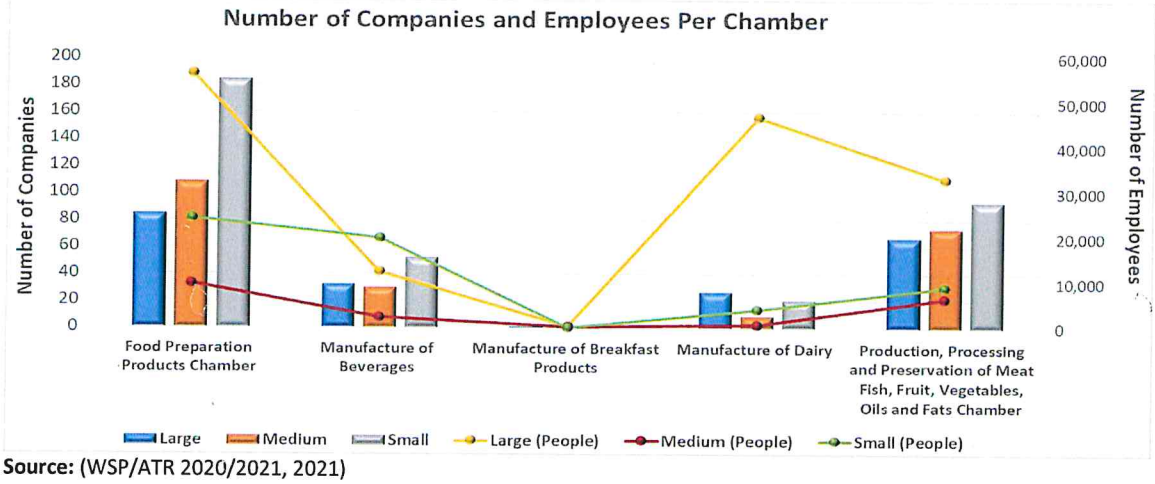
There has been a steady increase in the total number of employments in the sector over the past five years.

[2] The percentages in this section are limited to provincial distribution.

1.6.1 EMPLOYMENT BREAKDOWN BY SUB SECTOR

The employment breakdown for each chamber is derived from the 2019/20 Annexure II. An analysis of the WSP-ATR data illustrates that most of the highly skilled (NQF Level 6-10) employees within the sector are concentrated in the big companies. Figure 8 below renders the number of companies/chamber/company size and the number of people/chamber/company size. The Food Preparation Products Chamber employs the greatest number of people (90,690) and has the largest number of companies (376). The Dairy Chamber has the second lowest number of companies at 57 but has the second highest number of employees at 51,782. The number of people employed increased in all chambers expect the Manufacture of Breakfast Product Chamber where the number of people decreased to 581 from 652 in 2020. The Dairy Chamber had the highest increase; 51,782 personnel in 2021 from 22,904 in 2020. The Production, Processing and Preservation of Meat, Fish. Fruit, Vegetables, Oil and Fat increased to 48,856 from 38,722 in 2020. Overall, the number of people employed in the sector grew to 226,855 from 175,765 in 2020.

Figure 7: Employment breakdown by sub-sector



Source: (WSP/ATR 2020/2021, 2021)

1.6.2 Employment by gender and occupational Groups (add training data AT)

The overall concern from WSP data is gender representation but of greater concern is the job losses impact have been severely skewed with significantly more females losing their jobs. The gender breakdown of employment in the sector based on a comparative analysis of 2019/20, 2020/2021 and 2021/22 WSP submissions illustrates that the sector remains male dominated at 59.3% male, a reduction of 1.1% from 2020 and. In 2021 there was a drop in male representation in five of the eight categories as compared to 2020, with the exceptions being professionals with an increase of 4.67%, elementary occupations with an increase of 4.2% and managers with a marginal increase of 0.13%. In contrast, in 2021 the female's representation increased in all categories except service and sale workers. The highest female increases were observed for plant and machine operators and assembler at 12.3%, followed by elementary occupation at 10.4% and managers at 6%. The service and sales workers had the highest decline in 2021, a reduction of 9.1% for males and 20.6% for females, which is attributed the COVID-19 pandemic, which saw the closure of non-essential businesses during stage 4 and 5 lockdowns. Managers may be the category to support in terms of "African female" growth in numbers. The classification from technical to elementary is dominated by historically disadvantaged individuals (HDIs). It is therefore critical that learning interventions should be channelled mostly towards upward mobility of HDIs. The (World Economic Forum,

2021), highlights the growing gender gaps and the impacts of COVID-19 in reversing global gains. Significant data on females is emerging. Technology-based jobs are noted with underrepresentation and reversal in representations due to COVID-19. The distribution of job among the various categories remained fairly constant in comparison with 2020, the exceptions being elementary workers which had an increase of 1.78% and service and sales worker, which had a decrease of 1.47%.

1.6.3 Employment by Age

The breakdown of employees by age illustrates that most employees in the sector, 93 081 (49%) fall within the 35-55 age category, while there were 83 374 (44%) employees that were younger than 35 years old. In addition, employees older than 55 years old comprised of only 12 422 (7%) of employees in the sector. Consequently, there is enough pipeline within the 35-age category in the sector to replace those approaching retirement.

1.6.4 Employment by Race

An analysis of the 2021 WSP reveals the largest racial group employed in the Food and Beverages Manufacturing Sector in 2020/21 are Africans, making up 70%, an increase of 1% from 2020. Coloured are next representing 17.5% (a drop of 0.5%), followed by Whites at 9.3% (drop by 0.34%) ,and Indian/Asian at 3% (drop by 0.24%). According to Figure 9, Africans are predominant in all categories except Managerial, where whites are more prevalent at 43%. In 2021 African representation increased in all job categories, except for service and sales worker, which is attributed to the restrictions brought upon by the COVID-19 pandemic. The other race groups demonstrated a decrease in representations in most job categories. The professional job category demonstrated year on year growth among most race groups, with the exception of Indian/Asian in 2021, a potential indicator of the growth of digital adoption in the sector. An analysis of females only demonstrate that the African female is predominant in all occupational categories except managerial; at the managerial level African females represent 34.9%, a drop of 0.06% from 2020, whilst white females represent 38.8%, an increase of 0.39% from 2020. The overall number of African managers has increased in comparison to the findings from the 2019/20 WSP, by 0.5%, but more still needs to be done in the recruitment of Managers of African origin. The sector still needs to continue its effort of upskilling Africans through different training initiatives that will in turn address transformation challenges within the sector.

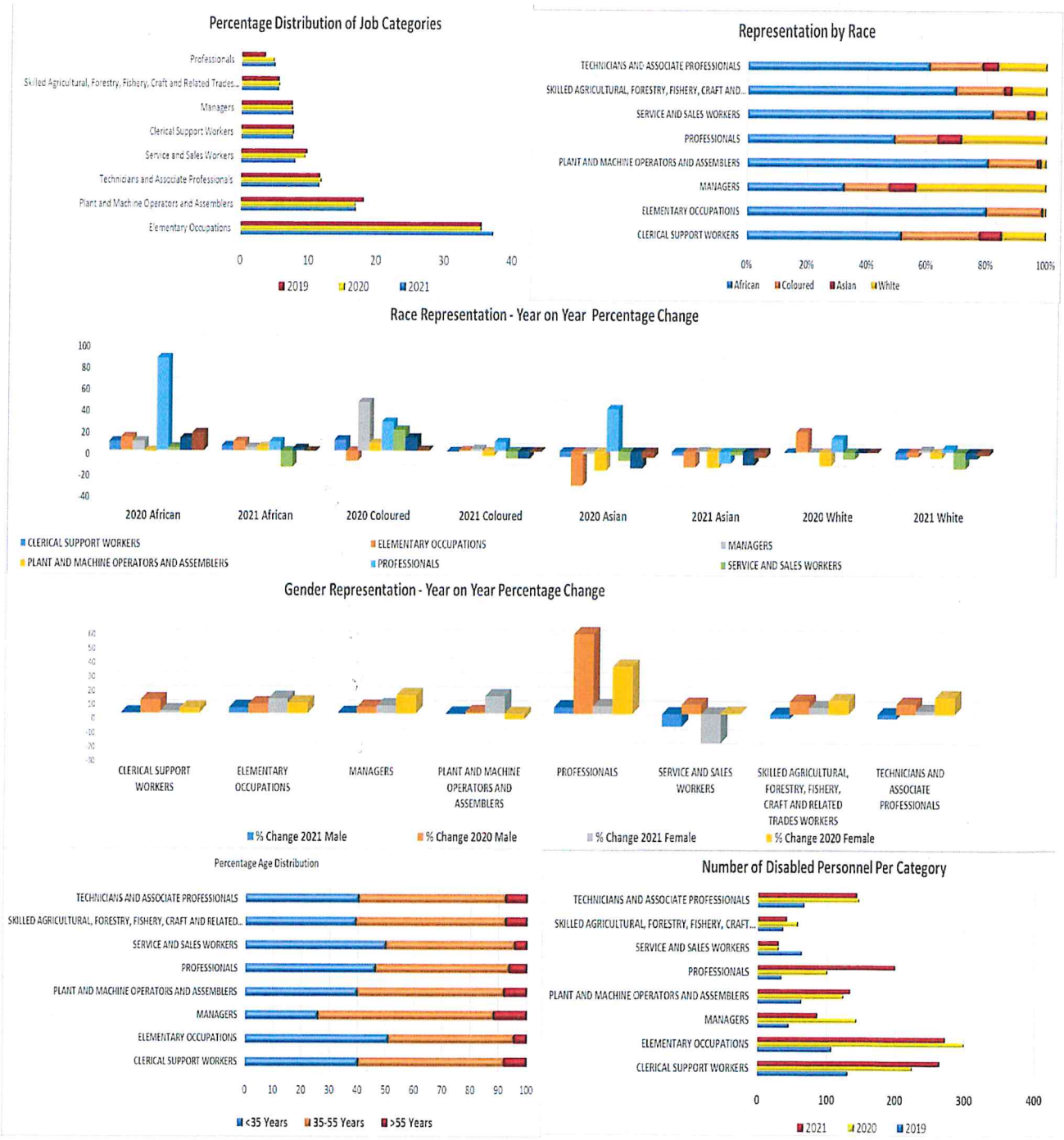
1.6.5 Employment by Disability

Employees with disabilities only represent 0.61% of total employment in the sector, indicating a 0.01% increase in employment of people disabilities with as compared to 2020/21. The elementary occupation has the highest proportion of workers with disabilities. In the professional category the number of people with disabilities almost doubled increasing to 199 from 100 in 2020/2021. The number of personnel with disabilities increased in the clerical support workers and plant and machine operators and assembler categories in comparison to 2020. These figures should be treated with a degree of circumspection because some employees do not disclose their disability status as mentioned by the stakeholders during the interviews conducted. This falls far short of the 4% target set by government. Consistent with this, the FoodBev SETA must continue to target and fund projects that are aimed at increasing the number of people with disabilities in the sector.

1.6.5 Employee Profile by Province

The provincial distribution of employees is largely concentrated in the country's economic hubs, Gauteng at 51% and Western Cape represents 35% of the employees followed by KZN at 6%. The provinces with the least number of employees are Northern Cape at 0.5%, Free State at 0. 8% and Limpopo and Mpumalanga at 1% each (WSP, 2019/20).

Figure 8: Occupation profile of the sector 2019/20/21



Source: (WSP/ATR 2020/2021, 2021)

1.7 CONCLUSION

The chapter has also highlighted the impact of COVID-19 on the different industries of the sector and highlighted areas that have been reported as high impact areas like the global and local supply chains, imports and exports and sales of specific foods amongst others.

The employment breakdown of the sector by occupations illustrates that the sector is predominantly dependent on elementary occupations, which is expected in a developing country where manufacturing operations are largely manual or semi-automated. However, 4IR is driving automation and digitisation, supported by globalisation. In the racial profile of the sector, Africans (both male and females) constituted most employees in the elementary occupational category at 80% (both male and female) and increase of 1.3% from 2020 with whites at 0.9%, a decrease of 0.1% from 2020. Africans (both male and female) encompassed 32% (no change from 2020) of employees in the managerial occupational category compared to 43% (no change from 2020) of Whites (both male and female). However, in analysis of the females only, African females represent 34.85% (a decrease of 0.06% from 2020) of managerial position whilst White female managers represent 38.8%, an increase of 0.4% from 2020 Black, Coloured, Indian/Asian employees are least represented in the managerial occupational category relative to whites therefore, transformation should be a strategic focus area in skills development, aimed at Africans to occupy higher skilled positions in the sector and have a greater percentage of managerial jobs that reflects the countries demographics. Regarding gender, males occupied 61.8% of managerial positions, a decline of 1.16% from 2020 and females only 38.2%, an increase of 1.2% from 2020. Whilst there has been marginal improvements in female representation, they are still underrepresented. Females in the service and sales workers category experienced the greatest job loss, of 20.60%. This emphasizes that focus should be on female development.

The disability figure of 0.61% for the sector falls woefully short of the 4% employment target set by government, hence FoodBev SETA needs to consider increasing the number of disabled learners entering learning programmes in the sector to achieve this target. One of the interventions could be to consider partnering with institutions that represent people with disability and those with special needs to improve access of people living with disabilities into the food and beverage manufacturing sector through skills development.

CHAPTER TWO: KEY SKILLS CHANGE DRIVERS

2.1 INTRODUCTION

The purpose of this chapter is two-fold: firstly, this chapter identifies and outlines the current and future key drivers of change that influence the skills supply and demand in the Food and Beverages Manufacturing Sector and secondly, it provides an analysis and implication of policy frameworks that affect skills demand and supply in the sector. The change drivers are identified through literature and empirical research which included in-depth interviews (virtual focus group discussions and one-on-one interviews) and key stakeholder surveys.

2.2 FACTORS AFFECTING SKILLS DEMAND AND SUPPLY

The COVID-19 pandemic has impacted the Food and Beverages Manufacturing sector across the world. The outbreak of this virus resulted in wide-ranging socio-economic consequences including the loss of lives, shrinking government revenues, rapid increase in joblessness and disruption of food and beverages supply chains (United Nations, 2020). The landscape of the supply and demand of skills in the sector is influenced by various long-term drivers which directly impact skills planning initiatives. Below are the long-term drivers of change:

- **Technological Advancements** (Akyazi et al., 2020; Telukdarie et al., 2020). Technology is radically transforming industries as food and beverages companies are looking for new way to improve their products and services to counter the impacts of climate change, globalization and changing consumer preferences. COVID-19 has accelerated the shift to digital services and digitalization has become a basic need.
- **Climate Change** (FAO, 2020a; von Braun, 2020): Climate change will have far reaching implications for the food and beverages industry. Climate change and associated severe weather, droughts and fires will continue to disrupt food availability, reduce access to food, and affect food quality consumed. Consumers are continuing to choose plant-based diets and expect more sustainability from food manufacturers.
- **Food Safety** Food safety is of a particular interest for consumers in emerging and developing countries (Meixner & Katt, 2020; Olaimat et al., 2020; Shahbaz et al., 2020). Adhering to the food safety standards can help prevent outbreaks of food-borne diseases. Food safety has gained more attention as companies strive to prevent the spread of COVID-19.
- **Health and Nutrition** (Hassen et al., 2020): Consumers are paying more attention to safeguarding their health. The need to consume healthier food has also emerged during the COVID-19 pandemic. FoodBev companies must ensure they provide clean and healthy food to continue improving brand image.
- **Globalisation (Competitiveness and Urbanisation)** (de Bruin & Dengerink, 2020; Putra et al., 2020): Urbanisation has become a global phenomenon that affects food systems. Continued urbanization and income growth are expected to further alter diets of the growing urban population. The COVID-19 pandemic introduced unexpected stresses on food systems, creating many immediate challenges. Providing sufficient food now and in the future is important.

The Research team adopted a survey with 181 respondents indicating importance of change drivers in the sector, technology was the highest ranked, followed by food safety, globalization, health and nutrition, and climate change.

Technological Advancements: Technology is still a major change driver in the food and beverages manufacturing sector Technological advancement is having a profound effect on the Food and Beverages Manufacturing sector as companies are looking for new ways to

improve their products and services (Akyazi et al., 2020; Telukdarie et al., 2020) This is confirmed by stakeholder during interviews when they indicated that technology shifts in food and beverages manufacturing are occurring in line with the shift to Industry 4.0. Companies have adopted digital technologies to optimise and unlock operation excellence. The competitiveness of food industry enterprises is closely linked to their ability to implement new technologies. There has been a rise in encryption and cybersecurity, as digital technology, and artificial intelligence applications increase. The top ten (10) technologies manufacturing companies are expected to adopt are: cloud computing; internet of things and connected devices; E-commerce and digital trade; big data analytics; robots, non-humanoid; encryption and cyber security; artificial intelligence; 3D and 4D printing and modelling; text, image and voice processing and power storage and generation (World Economic Forum, 2020). Application of 4IR technologies will lead to a loss of jobs arising from automation; however, it could also lead to new labour demand through productivity increases (Asian Development Bank, 2021). The business activities are still expected to have a higher proportion of humans to 2025 include reasoning and decision making, coordinating, developing, managing, and advising and communication and interaction (World Economic Forum, 2020). The top three barriers to new technology adoption are skills gaps in the local market, inability to attract specialised talent and skills gap in organisations leadership.

Business/ Skills implications: Businesses must be alert to the changing environment and adapt their workforce planning and development strategies to ensure alignment with future skill requirements. WSP and other analysis already reflects moves away from lower-level jobs. Companies deploying 4IR technologies considering COVID-19 are likely to recover faster from heavy disruptions arising from the pandemic and be more resilient in the future. In terms of skills, transformations, and fundamental shifts in the industry require diverse advanced skills. Professionals with technological skills will represent the highest share among all roles. Moreover, judgment and decision-making and critical thinking skills will become more important by 2030 in the sector (Asian Development Bank, 2021). There is a strong need to improve the quality of industry-relevant education and training courses to ensure stronger alignment with the skills demanded by employers.

Climate Change: Climate change generally refers to all changes in the patterns of weather and has a severe impact on global agricultural production and food security (FAO, 2020a). During interviews participants indicated that the food industry is vulnerable to the impacts of climate change. Food and beverages manufacturing companies are exposed to a range of direct and indirect risks that have the potential to disrupt the quality, demand, business continuity and ultimately profit. Climate change affects food production, availability of and access to food, food quality, food safety, diet quality, and thus people's nutrition and health (von Braun, 2020). Participants from the fish industry reported that rainfall patterns and increases in extreme weather events in the Western Cape affect fish production. The winter season is especially tougher on the industry as many seasonal workers often abscond from working during this time, thus creating a demand for workers who can withstand the harsh climate (Food and Beverage SETA, 2021a). COVID-19 comes at a time when underlying climate change impacts are already compromising food and water security. Southeast Asia, which supplies 50% of the world's rice exports, is experiencing its worst drought in 40 years (United Nations Environment Programme, 2020). The (United Nations Environment Programme, 2020) further argues that climate change will exacerbate the vulnerabilities of food systems and human health in countries already suffering from high levels of hunger.

Business/Skills implications: Food production will continue to be vulnerable to the impacts of rising global temperatures with water stress and drought becoming more common. Understanding risks associated with climate change can help unlock innovative ways to build resilience and increase long term-profitability (Food and Beverage SETA, 2021a). Impacts of climate change presents a skills development opportunity for specialist skills in data gathering, advanced crop production, biotechnologists, biochemists, environmental and sustainability specialists, information sciences, environmental sciences, water management, risk management, food technology and food science.

Food Safety: Zooming in on safety issues in the sector, food safety is the most fundamental compliance issue that continues to pose challenge for the industry. In addition to providing nutrients, studies have found that food can also potentially be a source of harm to a consumer. Hazards associated with food include microbiological pathogens, naturally occurring toxins, allergens, intentional and unintentional additives, modified food components and agricultural chemicals. Hence, food safety is needed. Food safety is concerned with the recognition and control of risks and hazards associated with food production and consumption which could result from chemical or microbiological contamination (FAO, 2020a). Effective food control systems have become even more essential to protect the health and safety of consumers. Even though COVID-19 is transmitted through airborne respiratory droplets, recent studies show that food safety has gained more attention to prevent the spread of COVID-19 among producers, processors, packagers, and consumers of food. The pandemic has contributed to the creation of a high-risk environment to food safety. The global food supply is now susceptible to disruption by the transmission of the COVID-19 among workers in locations and facilities where food is produced, processed, packaged, and sold (Tarver, 2020). In many countries, including South Africa, food and beverage companies have adapted to operate in a volatile, uncertain, and complex environment. As a result, COVID has amplified the need to ensure the highest safety standards to ensure minimal closure due to positive cases (Food and Beverage SETA, 2021a). The industry has taken a four-pronged approach to ensure safety or producers and personnel (Cable et al., 2020; Telukdarie et al., 2020). The approach includes sanitation, social distancing and facemasks coupled with quarantine of infected individuals.
Business/Skills implications: Investing in, developing, and maintaining of leading-edge safety and quality standards continue to be some of the ongoing costs of doing business in the sector. The industry needs to formulate effective ways to ensure safer food. The need to optimize product quality and minimize foodborne hazards across production and the supply chain is greater than ever before. The sector needs to invest extensively in traceability, testing and labelling to counter the continued impact of consumer food safety. The sector will need to develop targeted training programmes for food safety, HACCP standards, risk management, supply-chain communication, food quality and related regulation and link them to vocational training on occupational safety and health issues.

Health and Nutrition: One of the drivers of change in the food and beverages manufacturing industry is the rising growing demand for healthy and nutritious food among the global population (Pérez-Rodrigo et al., 2021). According to participants there is a continued shift in consumer consumption patterns towards natural, organic and healthy eating driven primary by the need to preserve and enhance their health and appearance (Food and Beverage SETA, 2021a). Maintaining a healthy diet is becoming essential as the contributions of sugar, salt,

and fat to nutritional-related problems such as obesity, hypertension and stroke are receiving a great deal of attention. Consumers now desire food with fewer sugar and fat and more fibre and vitamins to fuel their bodies (Meixner & Katt, 2020). Some participants indicated that they are reformulating recipes to reduce the salt and sugar. Research shows that COVID-19 has triggered a surge in demand for healthy and nutritional food. (Cable et al., 2020) argues that COVID-19 is fatal for people suffering from chronic or acute hunger or malnutrition. It has therefore become even more important for consumers to review their eating habits to keep their immune systems resistant against the pandemic. As the COVID-19 crisis continue to spread across the world, it will have lasting effects on most of the world's population, their nutrition and health. As a result, consumers will continue to seek ways to improve their diets to counteract escalating obesity and non-communicable diseases.

Business/skills implications: The changing consumer behavior poses challenge to the industry to respond with innovative products designed to meet current and future nutritional requirements of the growing global population (de Bruin & Dengerink, 2020). This further offers great opportunities for companies who can harness food science and technology developments to deliver revolutionary products which meet consumer needs. Food scientists who have interest in food reformulation will continue to be in demand as the sector strive to provide healthier, nutritious, and sustainable food choices to the consumers and improve public health (Akyazi et al., 2020). The sector also needs to develop skills in the areas of food hygiene, food labelling, food technology, marketing, social media, and user experience specialisation.

Globalisation (Competitiveness & urbanisation): An analysis of interviews conducted with participants from the industry shows that the phenomenon of globalization is having a major impact on food systems around the world. Urbanisation will play a key role over the coming decades in shaping food systems in the world (Putra et al., 2020). This is supported by interview data which indicates that many of the changes in food systems resulting from globalisation are closely associated with socio-economic drivers such as urbanization, increasing incomes, market liberalization and foreign direct investment. Indications are that food demand will increase dramatically in 2050 in Africa and the world at large. However, the COVID-19 has caused disruptions in global food supply chains and created food security risks in many countries (World Bank, 2020). According to the (United Nations World Food Programm, 2020) as the coronavirus crisis continues to unfold, an estimated 265 million people could face acute food insecurity by the end of 2020. Furthermore, exports drive the South Africa food and beverages industry, and have a major impact on its success. The disruption in supply chains resulting from lockdown restrictions caused by COVID-19 negatively affected the competitiveness of the industry. Being uncompetitive is not an option. The industry's survival depends on its ability to compete in international markets.

Business/skills implications: COVID-19 pandemic has paved way for companies to build more resilient food systems/supply chains and come up with innovative methods such as e-commerce to keep sales growing (Fan, 2020). Business response to the COVID-19 pandemic include acceleration of digitalization of work processes; acceleration of automation; increased remote working and acceleration of the upskilling/reskilling programmes (World Economic Forum, 2020). Investment in innovation, research and development, market development and market access are required to maintain global competitiveness (World Economic Forum, 2020). Impacts of COVID-19 on supply chains include localised procurement.

Summative Analysis: Change drivers and impact on skills planning

The change drivers identified together with the COVID-19 pandemic are likely to have several implications for skills demand and supply in the sector for the foreseeable future. There are generic occupations that are expected to increase in demand in the food and beverages industry and these are: Data Analysts and Scientists; Van and Motorcycle Drivers (for e-commerce deliveries); Digital Marketing and Strategy Specialists; Database and Network Professionals; Business Services and Administration Managers; Business Development Professionals; Big Data Specialists; AI and Machine Learning Specialists, Advertising and Public Relations (World Economic Forum, 2020). Some of these trends are already evident in WSP analysis. As COVID-19 continues to ravage the world, the industry is expected to experience an increased demand for skills such as Food Scientists, Food Technologists and Food Safety and Hygiene Specialists to ensure improved food safety operations and processes. These emerging occupations as well as the current roles, will require the workforce to have the following associated generic skills: critical thinking and active learning; written and verbal communication; numeracy; complex problem solving; management; social; evaluation, judgement, and decision-making; technical; computer literacy; and digital/information and communication technology (Asian Development Bank, 2021; World Economic Forum, 2020). Specific technical skills and skills related to the new technological developments, along with advanced marketing and sales as well as skills in packaging and marketing become important. Expertise are required in fields of research and development, material science engineering and packaging technology.

2.3 4IR AS AN ENABLER FOR SECTOR OPTIMISATION

According to the (World Economic Forum, 2020) the following combinations of 4IR technologies can address of some of the challenges and create more effective production systems in the food and beverages industry:

- Digital building blocks i.e. new computing technologies, big data and advanced analytics, the Internet of Things (IoT), artificial intelligence, machine learning, supply chain (resilience design), Blockchain, and virtual and augmented reality.
- Advances in science i.e., next generation biotechnologies and genomics; energy creation, capture, storage and transmission.
- Reforming the physical i.e., autonomous and near autonomous vehicles, advanced smart robotics, additive manufacturing and multidimensional printing, advanced materials, and nanotechnologies.

Big data and data analytics can play an informative role for policy decisions and the facilitation of cost-accounting that can create a significant impact on consumer consumption (Asian Development Bank, 2021; World Economic Forum, 2020). Connectivity technologies i.e., social networks, peer-to-peer networks and online e-commerce could enable tracking of consumption patterns and increase access to nutritional food alternatives (World Economic Forum, 2020). Skills development needs to focus on future skills awareness, complex systems implementation, and technological maturity analysis.

2.4 POLICY FRAMEWORKS AFFECTING SKILLS DEMAND AND SUPPLY

This section is on the alignment of sector skills planning to frameworks affecting skills demand and supply in the sector. The table below identifies the relevant national priorities and its implications on the provision of skills in the industry.

Table 5: Policy Frameworks Affecting Skills Demand and Supply

Policy Frameworks	Relevance	Policy Implications on skills planning
National Development Plan (NDP)	Targeting the creation of 11 million jobs by 2030. In pursuance of this target, the NDP has identified sectors that possess high potential for economic and job growth. The Agro-processing sector has been acknowledged as a sector with immense job creation potential.	Focus on economic growth and job creation in the industry especially in the Agro-processing and Aquaculture industries. Critical skills needed in the sector are artisans, safety controllers, operations managers and laboratory assistants. SETA funds learnerships, workplace placements and internships.
National Skills Development Plan (NSDP)	To improve access to occupations in high demand and priority skills aligned to supporting economic growth, employment creation and social development whilst also seeking to address systemic considerations.	Focus on training intermediate skills (artisans, technical skills) to support the country's socio-economic development goals. Provide mentorship programme for small businesses. FoodBev SETA supports TVET and CET Colleges across the country for capacitation and accreditation.
The South African Economic Reconstruction and Recovery Plan	The plan aims to expedite the recovery of South Africa's economy that was deeply affected by the Covid-19 pandemic. Education and skills development need to be boosted to strengthen the economic reconstruction and recovery.	Reskilling and retraining of workers to address skills mismatch triggered by COVID-19 pandemic and digital acceleration. The production of artisans with the required skills and competencies to drive the delivery and maintenance of infrastructure will be up scaled. In the immediate term, focus SETA skills training on addressing the impact of Covid-19.
Medium Term Strategic Framework (MTSF) 2019-2024	The MTSF 2019-2024 ensures unified and consistent policies across government in addressing the challenges of unemployment, inequality and poverty	The FoodBev SETA respond and contributes towards Priority 3. The SETA enters into strategic partnerships in the area of post-school education and training to increase the uptake of learners.
Protection of Personal Information Act (often called the POPI Act or POPI Act)	The Act aims to improve the management of personal information including but not limited to; company details, learner personal information and other stakeholder information handled by the SETA.	The FoodBev SETA uses stakeholder personal information for various administrative and skills planning requirements under the guidance of the Protection of Personal Information (POPI) Act No 4 of 2013.
Report of the Presidential Commission on the 4th Industrial Revolution	4IR focus review of required skills and actions for SA	Implication on SETA skills investing specific to 4IR
Human Resources Development Strategy for South Africa 2010-2030 (HRDS-SA)	To accelerate training in the priority areas including artisanship. HRDS leverages public/private sector programmes to create employment opportunities/work experience for new entrants into the labour market, helps in improving coverage/efficacy of vocational guidance	Focus on TVET collaboration, artisan development, internships and bursary provision aimed at creating a pool of HET graduates in the Food and Beverages Manufacturing Sector. Initiate career and pathway guidance projects.
White Paper on Post-School Education and Training	PSET is concerned with a post-school system that is inclusive and addresses poverty, inequity, and targets the unemployed youth.	To fast-track the production of the requisite skills to propel our economic growth. Expand partnerships with TVET Colleges focusing on projects aimed at increasing college-to-work transitions.
Industrial Policy Action Plan (IPAP)	To address the key challenges of economic and industrial growth and race-based poverty, inequality and unemployment.	Skills shortages within the Agro-processing sector; millers, repair and maintenance technicians, food and safety controllers and grain quality graders. Increase learnerships, apprenticeships, internships and bursaries in the food and beverages sector.
National Skills Accord	Identifies eight commitments to make on training and skills development.	Increase Internship and placement opportunities available within workplaces. Expand partnerships with TVET Colleges.
Skills Development Act No 97 of 1998	Increase the quality and quantity of artisans.	Facilitate the development of hard to fill artisan occupation skills in the FoodBev Manufacturing Sector.
Revitalization of the Agriculture and Agro-processing Value Chain, and the Agriculture Policy Action Plan	To speed up land reform and stimulate the rural economy.	Increase access for NGOs, CBOs, NPOs and SMME's to discretionary grants to train on and bridge the scarce and critical skills gap.
New Growth Path (NGP)	Emphases that SETAs must prioritise the identification and funding of the main sector skills need.	The need to produce many engineers and artisans.
Strategy on Support and Development of Agro-processing Enterprises in South Africa	The strategy is anchored on four intervention pillars to mitigate barriers to entry, and improve competitiveness of Agro-processing enterprises. One of the main barriers to active participation, inhibits the competitive nature of enterprises is the non-compliance of facilities to pre-requisite Agro-processing norms and standards.	Improved competitiveness of enterprises. Increase support towards small and medium Agro-processing enterprises to tackle the high cost of being trained and certified on these norms and standards that act as a barrier to entry and participation.

2.5 SUMMATIVE ANALYSIS

National policy through the National Development Plan (NDP), National Skills Development Plan (NSDP), Human Resources Development Strategy for South Africa 2010-2030 (HRDS-SA), Skills Development Act and the Economic Reconstruction and Recovery Plan (ERP) all lean towards the production of artisans with the required skills and competencies to drive the delivery and maintenance of infrastructure through increased collaboration between SETAs, industry and TVET colleges. There may be several differences and additions as they may vary between the policies documents referred to in Table 4. However, the artisan trade is central to the national skills agenda. Further, the SETA will continue to form partnerships to address the skills shortages that link to the above legislation e.g., National Skills Accord pertaining to the provision of internships. The key role of Technology as a driver would imply a more technically competent artisan. FoodBev SETA will develop a series of industry led TVET programs targeting skills for 4IR in priority sectors encompassing new flexible courses, credentials, and industry recognition mechanisms. The global economic and business landscape is changing at a speed and with an intensity that seem unprecedented. The identified drivers of change and national plans are influencing skills sets required in both old and new occupations. In this way, the development of education and training systems will need to continue to adopt as people's lives and working demands change. Employees will need to develop and demonstrate the ability to combine their technical knowledge, skills and abilities with interpersonal behaviours and qualities to avoid issues of mismatch.

2.6 Conclusion

This chapter identified a number of factors and trends currently driving and influencing the demand and supply for skills in the Food and Beverages Manufacturing Sector and major national plans in the sector and the skills responsibilities they trigger within the SETA environment. The COVID-19 pandemic has disrupted food systems and reshaped all change drivers identified. The health and nutrition, food safety and technological advancement drivers are experiencing the most significant changes, this is also significant mitigation to COVID-19. Consumers will continue to seek ways to improve their diets to manage their health. The expectation is that there would be lasting shifts in consumer behaviour in dealing with the COVID-19 response. Globalisation will further drive change as the sector strives to become more competitive to ensure sustainability. The lack of availability of water has had a devastating effect on certain parts of the food and beverages processing sector. The COVID-19 pandemic has accelerated the shift to digital services and digitalization has become a basic need. Food manufacturers will continue to adopt more technology to streamline their operations and boost output. The transformative role of the 4IR should be embraced for industry optimisation as it presents several potential benefits for the sector.

CHAPTER THREE: OCCUPATIONAL SHORTAGES AND SKILLS GAPS

3.1 INTRODUCTION

This chapter covers the extent of occupational shortages and skills gaps in the Food and Beverages Manufacturing sector. Quantitative and qualitative research tools are applied in gathering data, with the primary data sources being the 2020/21 WSP's/ATR's and qualitative instruments. Focus groups and interviews are used to gather the data collection, the database is the FoodBev employer database, SARS database and associations database. The overall population for the focus groups and survey was the employer database of the SETA. The demand analysis is a combination of the top ten occupations, extracted from WSP, and literature. Finally, the chapter identifies the Sectoral Priority Occupations, in relation to the issue of demand and supply.

3.2 SECTORAL OCCUPATIONAL DEMAND

The approach taken to determine occupational shortages and skills gaps for the development of the Sectorial Priority List is conducted through multiple data gathering mechanisms. The initial approach is to analyse and quantify global knowledge on future skills. The second involves the analysis of the WSP/ATR and PIVOTAL plans and the third involves focus group interviews/ data collection with stakeholders. The global knowledge provides a guide for future and current skills impacts, whilst the WSP/ATR and PIVOTAL plans provides a SA perspective and current status of the sector. The analysis of the WSP/ATR database focused on the section where hard to fill vacancies were reported. The analysis yielded Hard to Fill Vacancies (HTFV) in the last 12 months along with the reasons behind the vacancies. The forecasting of skills shortages is perceived to be a combined consideration, summarised.

3.2.1 GLOBAL SKILLS TRENDS IN FOOD AND BEVERAGES

A qualitative analysis of global skills related literature is conducted so as to provide a global perspective. FoodBev is part of the broader SA ecosystem and SA is a part of the global skills ecosystems. Global trends affect international sales of SA products with SA competitiveness being influenced by local productivity and efficiencies. This section of the research work conducts an international review of peer reviewed publications and industry specific white papers. The objective is to look beyond the current SA data, this is especially valid due to limited internal knowledge. This aspect of the report is premised on various fundamentals extracted from(Choi et al., 2019; Mckinsey & Company, 2017; World Economic Forum, 2018, 2019, 2020). The reports are based on fundamental research, but to reinforce validity the research team complements all aspects with the most recent peer reviewed references.

The World Economic Forum Global Competitive Index ranks SA at 60 (World Economic Forum, 2019)of 141 countries. The index highlights significant opportunities in digital business, where SA ranks below the average at position 73. Other aspects of the (World Economic Forum, 2019) report include limitations to growth, skills of the future workforce with SA ranking 107, skills of the current workforce with SA at 101 and for ICT adoption SA ranks at 89 (World Economic Forum, 2019). With the onset of COVID-19 this perspective has changed radically, including digitalisation of government departments, office collaborations, education, e-commerce, social systems.

The Food and Beverages Sector is set to grow at above 7% between 2017 and 2027 (Court, 2017). A key additional consideration in the SA context is entrepreneurship development. As

indicated by data in Chapter 1 SMME's are a major opportunity in the FoodBev sector. The SMME impact of COVID-19 is forecast to be significant. The FoodBev sector response to support SMME's in surviving the COVID-19 pandemic must be planned. An initiation point of validated data is the (World Economic Forum, 2018) report on the future of jobs. The report contains details of various aspects of the future of jobs, but the most interesting aspect for the food and beverages industry is detailed below. The roles increasing provide navigation on future skills required in the sector. In summary, marketing and software skills are key skills increasing. Emerging skills relates to data, artificial intelligence, and machine learning.

Table 6: Extracted from (World Economic Forum, 2020)

Increasing Job Roles	Decreasing Job Roles	Top 10 Skills for 2025
Data analysts and scientists	Data entry clerks	Analytical thinking
AI and machine learning specialist	Administrative and executive secretaries	Active learning and learning strategies
Big data specialist	Accounting, bookkeeping and payroll clerks	Complex problem solving
Digital marketing and strategy specialist	Accountants and auditors	Critical thinking and analysis
Process automation specialists	Assembly and factory workers	Creativity, originality and initiative
Business development specialists	Business services and administration managers	Leadership and social influence
Digital transformation specialists	Client information and customer service workers	Technology use, monitoring and control
Information security analysts	General and operations managers	Technology design and programming
Software applications developer	Mechanics and machinery repairs	Resilience, tolerance and flexibility
Internet of things specialist	Material recording and stock keeping clerks	Reasoning, problem solving and ideation

Key expansions of investments in skills in SA include, (Lesame, 2014) confirming that ICT infrastructure in Africa is behind the rest of the world. ICT/IT infrastructure and data science are key areas for investment in the Food and Beverages sector. An expanded set of IT and AI skills include cloud, programming, AI, Blockchain, big data and analytics, autonomous robots, simulation, cybersecurity and Industrial/Internet of Things (IIoT/IoT). It also includes the development of the smart factory requiring integration and operational skills (Pradhan & Agwa-Ejon, 2018).

3.2.2 Development and Focus on SMME's for Food and Beverages

A key consideration in global skills development is SMME's. The ability of SA to mature in the world of SMME is quantified in the (World Economic Forum, 2019) report, where SA ranks 39 of 141. Israel is at the forefront of entrepreneurship development (Heilbrunn & Almor, 2014). Geographic concentrations or technology hubs is a key driver. SA needs to grow SMME's in order to grow business sectors. Development of small business has to be prioritised as there is a disproportionate focus on the formal sector (Betcherman & Khan, 2018; Card et al., 2015). Skills development and SMME growth are linked. The training of learners with entrepreneurship skills has the most significant impact on developing entrepreneurs (Kluve et al., 2017). New business models and value chain development are key to unlocking entrepreneurship (Betcherman & Khan, 2018).

A global study comprising a sample of over 100 000 active participants confirms that Sub Saharan Africa (SSA) has the lowest digital skills relative to other countries. SSA has a representation of 4% compared to North America at 70% (Kelly & Firestone, 2016). The value of tech hubs in Africa is a proven and growing mechanism to deliver on skills and

entrepreneurship. (Avle et al., 2019) discusses the alignment of digital skills and entrepreneurship, providing insights into digital skills and SMME maturity. The impact of COVID-19 has resulted in positive impact on digitalisation, this results in a more significant drive towards digital skills in SMME and large businesses.

3.2.3. Workplace skills plan Analysis

A detailed analysis of the 2019/20 and 2020/21 WSP/ATR and PIVOTAL Plans is conducted. This is to compare actual investment, relative to HTFV. The total number trained in the year seems to of increased from 102K to 134k learners. The spend however seems to have decreased significantly from R511 Million to R352 Million. The Food Preparation Products Chamber is the highest investor in training. Whilst the Manufacture of Dairy Products extracts the highest proportion of training funds from the SETA. The total spend was R352 Million, of which the SETA funding was 24.3% (34% 2020). The table below provide a classification of the data.

Table 7a: WSP analysis of training

Chamber/funding	2020	2021	% SETA funding
Food Preparation Products Chamber	R267,738,477.55	R158,174,233.55	
Employer Funded	R193,986,781.00	R122,894,517.36	
SETA Funded	R73,751,696.55	R35,279,716.19	22.30%
Manufacture of Beverages	R106,073,695.06	R85,532,006.54	
Employer Funded	R95,691,817.03	R70,332,258.02	
SETA Funded	R10,381,878.03	R15,199,748.52	17.77%
Manufacture of Breakfast Products	R814,933.27	R1,073,595.00	
Employer Funded	R814,933.27	R1,073,595.00	0.00%
Manufacture of Dairy	R44,515,035.75	R35,511,606.66	
Employer Funded	R28,313,098.10	R22,770,454.16	
SETA Funded	R15,880,558.62	R12,741,152.50	35.88%
Production, Processing and Preservation of Meat Fish, Fruit, Vegetables, Oils and Fats Chamber	R91,864,908.26	R71,942,302.75	
Employer Funded	R55,508,770.62	R49,476,961.57	
SETA Funded	R36,356,137.64	R22,465,341.18	31.23%
	R511,007,049.89	**R352,233,744.50**	

Table 8b: WSP analysis of training

Row Labels	2020/21	2019/20	Occupation	2021
Short Courses	119996	83372	2019-332201 - Commercial Sales Representative	18448
Skills Programmes	5103	7980	2019-832904 - Food and Beverage Factory Worker	10948
AET/End-User Computing	2995	3121	2019-411101 - General Clerk	6475
Workplace Experience Placements	2739	2935	2019-312201 - Production / Operations Supervisor (Manufacturing	4600
Learnerships	1621	2815	2019-718906 - Bulk Materials Handling Plant Operator	4332
Bursaries	668	621	2019-122101 - Sales and Marketing Manager	4111
Apprenticeships	192	369	2019-718302 - Packing Machine Operator	4003
Professional Placements	111	202	2019-334102 - Office Administrator	3856
Internships	86	176	2019-132102 - Manufacturing Operations Manager	2779
			2019-313907 - Food and Beverage Manufacturing Process Controll	2653
Grand Total	**133511**	**101591**		

The analysis provides for the most significant number of courses being short learning programs, which has increased in 2021. The remaining programs have all decreased. An analysis of the top 10 occupations trained has some alignment with the SSP identification of HTFV. There is a concern on apprenticeships which has decreased significantly.

3.2.4 Skills gaps in the sector

Skills gaps refer to skills deficiencies in employees or lack of specific competencies by employees to undertake job tasks successfully to required industry standards. Focus groups

are used to identify skills gaps at the three occupational levels of companies. Literature indicates that core skills should be complemented by additional, role/level/company specific skills. The process seeks to identify the skills requirements for upskilling an employee aligned to current trends/skills needs, e.g., it is not sufficient to just equip an artisan with a specific skill set. The artisan is now required to have a broader set of skills which integrates with the rest of the business such as leadership, technical competencies such as ICT, control and instrumentation, the movement of an artisan to a technician or technically competent. Table 8 defines the three levels and the skills matric required per level.

Table 9: Skills Gaps in the Sector (Food and Beverage SETA, 2020b)

Major OFO Group	Occupations	Skill Gaps
Lower Level		
Elementary Occupations	Factory Workers	Literacy and Numeracy
		Hygiene Knowledge and food safety
	Meat Packer	Work readiness
		Leadership skills
	Mechanic Trade Assistant	Computer Literacy
Plant and Machine Operators and Assemblers	Juice Extraction and Blending Process Machine Operator	Computer Literacy and soft skills
	Meat Processing Machine Operator	Food Safety
Middle Level		
Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers	Confectionery Bakers	Industry Knowledge
	Quality Controller (Manufacturing)	Leadership skills
	Artisans	Technical Skills
		Experience
	Dairyman	Analytical Skills
	Refrigeration Mechanic	Computer Literacy
Technicians and Associate Professionals	Production / Operations Supervisor (Manufacturing)	Generic Management Skills
		Interpersonal Skills
		Analytical skills
Senior Level		
Managers	Engineers	Financial Management
	Finance Managers	Generic Management Skills
	Marketing Manager	Strategic Management Skills
	Production / Operations Manager (Manufacturing)	
	Production / Operations Manager (Manufacturing)	Problem Solving
		Diversity Management
Professional	Wine Maker	Industry knowledge
		Experience

Most of the skills gaps detailed in Table 8 have been identified in previous WSP/ATR. At the elementary level the skills gaps include computer skills, food safety skills, leaderships and technical skills. Analytical skills are also identified at the elementary level, indicating adoption of digital technologies. As operations become largely automated and digitalised, the key focus area of personnel is analysis of data; elementary workers would now need to be technical workers.

At the technical level the skill gap identified are management and analytical skills. The recurrence of analytical skills highlights the data centric nature of operations, decision are based on analysis of data, which is now wide spanned and voluminous. The data analysis is now more complex and sophisticated to provide greater levels of depth and insight. The analytical skills at the technical level is vastly different to the elementary level.

The skills gaps identified for lower-level occupation predominantly focused on literacy and numeracy, which is indicative of the need for Adult Education and Training (AET) programmes before other skills gaps can be addressed. Collaborative programs that involve multiple employers in the sector, educational institutions, and other players such as unions could go a long way in comprehensively responding to the skills gaps of companies.

3.2.5 HARD TO FILL VACANCIES & UNDERPINNING REASONS

The Research team conducts an analysis of the WSP/ATR/PIVOTAL Plans' specifically extracting details on Hard to Fill Vacancies (HTFV) and priority occupations. The vacancy analysis that is presented as mentioned, is limited to the top ten occupations that were in demand for 2020/21. There are 768 (WSP 2019/20) occupations with a total of 1 444 actual vacancies. The table below provides the reasons for HTFV, as extracted from the 2020/21 WSPs, reflect lack of relevant qualifications, lack of relevant experience, poor remuneration and unsuitable job location as the key reasons for vacancies being hard to fill. The FoodBev SETA focus groups, 2021 and SSP survey indicates over 60% agreement with the HTFV listed above.

Table 9: List of Hard-to-Fill Vacancies and Reasons Underpinning Hard-to-Fill Vacancies

Occupation	OFO Code	Vacancy frequency	Lack of relevant experience	Lack of relevant qualifications	Other	Poor Remuneration	Unsuitable job location	Unsuitable working hours
Food and Beverage Factory Worker	2019-832904	156	9	37	4	0	2	0
Millwright	2019-671202	71	15	45	0	7	8	0
Manufacturing Operations Manager	2019-132102	55	24	39	4	5	4	0
Food and Beverage Technician	2019-311903	39	21	35	0	0	0	0
Production / Operations Supervisor (Manufacturing)	2019-312201	35	12	27	2	2	0	0
Fresh Produce Packing Controller	2019-313906	30	0	6	0	0	0	0
Production Coordinator	2019-432201	29	9	3	2	0	0	0
Engineering Manager	2019-132104	22	12	24	0	2	4	0
Health and Safety Manager	2019-121206	15	2	2	7	4	0	0
Industrial Machinery Mechanic	2019-653301	11	11	6	0	0	0	0

Source: (WSP/ATR 2020/2021, 2021)

The research team analysed the data further to reflect the top 10 vacancies on HTFV per Chamber (Table 10). The Manufacture of Breakfast Products Chamber is the most underrepresented. The Food Preparation Products Chamber is the most significant in terms of the number of HTFV.

Table 10: HTFV Chamber Distribution

Chamber	Sum of Number of HTFV	Count of Sector responses
Manufacture of Beverages	194	140
Manufacture of Breakfast Products	9	7
Manufacture of Dairy Products	141	82
Food Preparation Products	722	406
Production, Processing and Preservation of Meat, Fish, Fruit, Vegetables, Oil and Fats	378	184
	1 444	**819**

Extracted from (WSP/ATR 2020/2021, 2021)

The table above reflects the top 10 vacancies from each chamber. At 1 331 the cumulative HTFV for the top 10 HTFV categories is 92% of the total 1 444 HTFV recorded. The top 10 list becomes a bit complex depending on the analysis. Traditional approach dictates the ordering of the number of vacancies. Table 11 reflects the non-traditional list, with exact occupational codes HTFV are calculated based on the exact number of people employed in this occupation, refer to total employed and % proportion. We see a different list of top 10, this time with only 2 of the traditionally calculated top 10. The most significant and common HTFV is the Millwright.

Table 11: Cumulative representation of top 10 HTFV

Vacancy	Data Science and Data Analytics	Digital Business Analysis	Digital Marketing	Digital Project Management	Robotics	Other	Total	4IR Ratio	% of Total HTFV	Total Employed	% Proportion	Lack of relevant experience	Lack of relevant qualifications
2019-832904 - Food and Beverage Factory Worker	10	3	6	17	20	100	156	36%	10.87%	42439	0.37%	9	37
2019-671202 - Millwright	15	5	13	16	20	2	71	97%	4.95%	687	10.33%	15	45
2019-132102 - Manufacturing Operations Manager	16	7	4	16	2	10	55	82%	3.83%	1331	4.13%	24	39
2019-311903 - Food and Beverage Technician	14	4	12	2	1	6	39	85%	2.72%	1268	3.08%	21	35
2019-312201 - Production / Operations Supervisor (Manufacturing)	15	2	2	8	2	6	35	83%	2.44%	4652	0.75%	12	27
2019-513101 - Waiter			23	4		5	32	84%	2.23%	917	3.49%	6	4
2019-832103 - Fish or Seafood Packer			5		20	6	31	81%	2.16%	2150	1.44%	23	2
Produce Packing Controller	30						30		2.09%	573	5.24%	0	6
Production Coordinator		2	0			27	29	7%	2.02%	1945	1.49%	9	3
2019-681102 - Red Meat De-boner	1		6		2	18	27	33%	1.88%	343	7.87%	13	9
2019-684305 - Quality Controller (Manufacturing)	10		3		3	7	23	70%	1.60%	1795	1.28%	8	14
2019-671101 - Electrician	8	3	1	2	4	4	22	82%	1.53%	595	3.70%	6	27
2019-132104 - Engineering Manager	11	3		4		4	22	82%	1.53%	233	9.44%	12	24
2019-611401 - Mixed Crop Farm Production Manager / Foreman	10		1	3		7	21	67%	1.46%	172	12.21%	8	12
2019-681203 - Confectionery Maker	20		1			0	21	0%	1.46%	28	75.00%	2	5
2019-121206 - Health and Safety Manager	2	2	7	4			15	100%	1%	154	9.74%	7	17
2019-214101 - Industrial Engineer	6	2	2	3		2	15	87%	1%	184	8.15%	9	11
2019-681104 - Fishmonger						15	15	0%	1%	154	9.74%	0	0
2019-653301 - Industrial Machinery Mechanic	11						11	100%	1%	108	10.19%	0	6
2019-315202 - Ship's Officer		6				2	8	75%	1%	68	11.76%	0	9

Source: (WSP/ATR 2020/2021, 2021)

3.2.6 The changing nature of work and future skills in the sector

This section shines light on the skills that are likely to be in greater demand (future skills). Based on the interviews, surveys and qualitative analysis of global literature, a range of the various skill sets required for the food processing industry are identified. The WSP and the SSP survey highlights digital (4IR) skills as critical and important. The world of work is undergoing dramatic changes (World Bank, 2019) due to factors such as scientific and technological advances, automation, globalisation, new ICTs and the drive for continuous improvement (Akyazi et al., 2020). While the abovementioned factors are bringing radical shifts to how people live and work, the global COVID-19 pandemic has accelerated the adoption of fully digitized approaches to re-create the best of in-person learning through live video and social sharing (World Economic Forum, 2020). As the world transitions to these new ways of working, questions arise about the skills companies will require–to improve their

performance and competitiveness. The skills and competencies needed within the food industry will rise across virtually all occupations (Akyazi et al., 2020). Smart technologies such as robotics, Artificial Intelligence (AI), Internet of Things (IoT) and machine learning are going to re-engineer business models (Akyazi et al., 2020). Key skills groups requirements up to 2025 include critical thinking and analysis, problem solving and self-management skills such as active learning, stress tolerance and flexibility (World Economic Forum, 2020). The demand for social and emotional skills, especially advanced communication and negotiation, leadership and strategic management, team management and adaptability will also increase rapidly at senior level. Higher cognitive skills such as creativity, critical thinking, teamwork, problem, decision making, and life-long learning will be crucial as workers will become responsible for more complex tasks (Akyazi et al., 2020; Mckinsey & Company, 2017). Finally, food safety and hygiene are some of the key skills expected to be recognized for many years post-pandemic, particularly at the lower occupation level. Having identified the various and potential future skills set, the FoodBev SETA needs to ask what steps need to be taken now to achieve a smooth transition into the future that benefits all of society. The new world of work will require innovative ways of mapping, developing and bridging skills across the workforce. Reskilling and upskilling efforts will be important in addressing future skills needs in the Food and Beverages Manufacturing sector post the global COVID-19 pandemic.

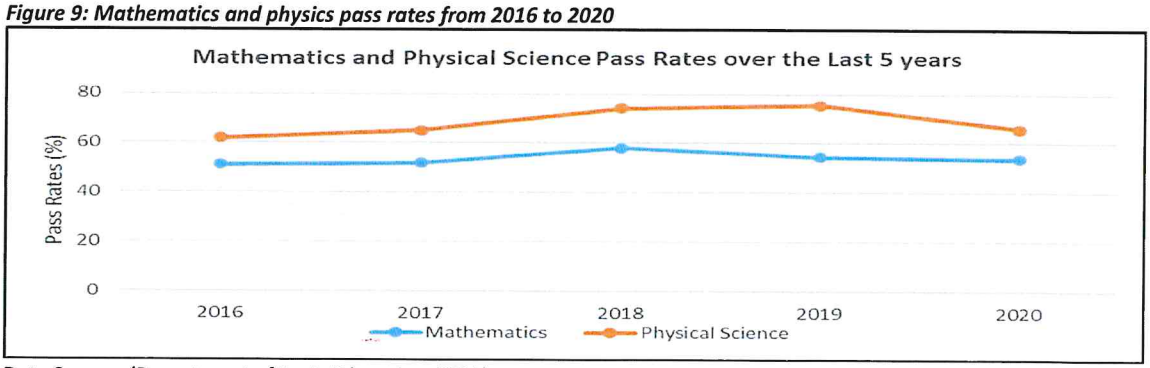
3.3 EXTENT AND NATURE OF SUPPLY

The first point of skills sourcing for the Food and Beverages Manufacturing Sector is through the Adult Education and Training (AET) at level 1-4 for both literacy and numeracy programmes. Level 4 of AET enables entrance to NQF level 1 Learnership Programme. However, some NQF level 1 qualifications does not require AET level 4 and are dependent on a pre-assessment exercise. Another source is the senior certificate (Grade 12), as it provides a pipeline directly into the sector for people entering the labour market. Secondly, it provides a pathway for entering Science, Engineering and Technology (SET) and Commerce major subject fields at the tertiary level. The above-mentioned subjects are some of the required subjects for careers in the sector. Food and Beverages SETA learning programmes are included to demonstrate the SETAs contribution to training in the sector.

3.3.1 Throughput at School Level

This section reviews the achievement of matric students in Mathematics and Physical Science from 2016 to 2020 as the SET programmes are essential for the Food and Beverage sector. Mathematics and Physical Science are important subjects for a technical workforce that is internationally competitive and sufficiently able to adapt to critical changes such as the Fourth Industrial Revolution.

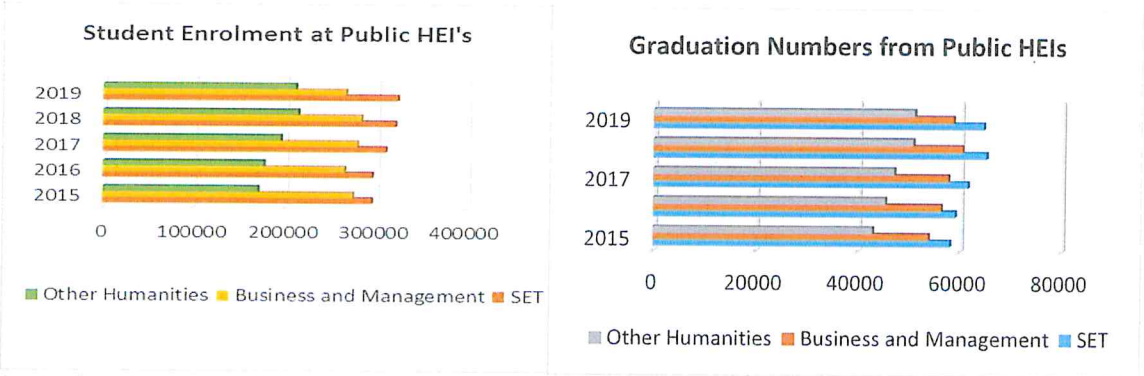
Figure 9: Mathematics and physics pass rates from 2016 to 2020



Data Source: (Department of Basic Education, 2021)

Figure 10 illustrates the pass rate for mathematics and physical science from 2016 to 2020. A steady increase in the pass rate of Physical Science is observed from 2016 to 2019. However, in 2020 the subject observed a decrease of 9.7% from 2019's 75.5%. In Mathematics a steady increase in the pass rate is observed from 2016 to 2018, but there is a decline to 54.6 and 53.8 percent in 2019 and 2020.

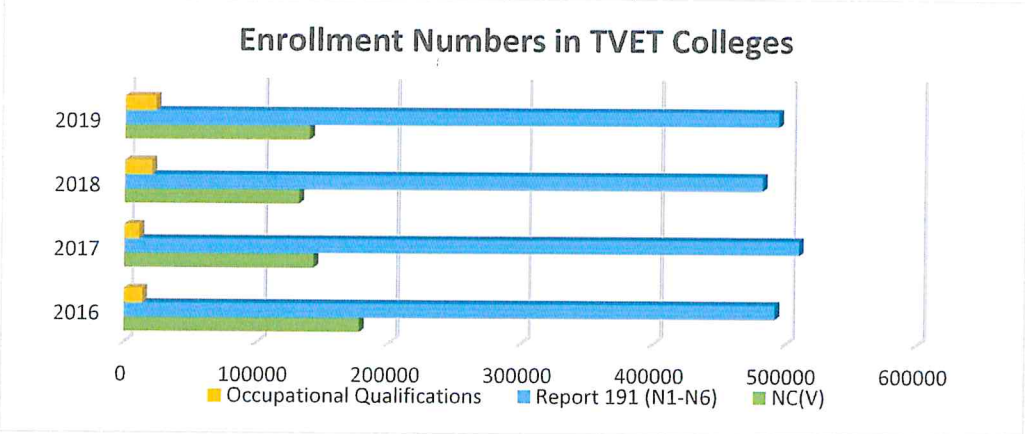
Figure 10: Number of Enrolled and Graduates at Public HEIs



Source: (DHET, 2021)

Figure 11 illustrates the enrolment and graduate numbers for SET, Business and Management and Other Humanities programmes at public Higher Education Institutions (HEIs). Business Management and Other Humanities are evaluated as they also provide essential skills to the Food and Beverage Sector. In the SET programmes there is a year-on-year increase in enrolment numbers, except in 2016. Business and Management there are decreases of 3 and 6 percent in enrolment rates for 2016 and 2019. Other Humanities typically demonstrated a year-on-year increase except in 2019. The graduation numbers across the SET, Business and Management as well as Other Humanities programmes increases steadily year on year, except for Business and Management in 2019.

Figure 11: Number of enrolments at TVETs in various programmes from 2016-2019



Source: (DHET, 2021)

Figure 12 illustrates a year on year decrease in enrolments. Exceptions are observed at the programme level; in 2016 the NC (V) and Report 191 (N1-N6) programmes had a slight increase in enrolment numbers and in 2018 an increase in enrolment for the occupational qualification is observed. Some of the programmes offered by NCV qualification include

Engineering and Related Design, Electrical Infrastructure Construction, Primary Agriculture, Finance, Economics and Accounting and Drawing Office Practice. Unfortunately, a holistic and comprehensive graduation rate is not available. However, there is a solid pipeline into the tertiary (Labour Market Intelligence Partnership, 2020) system that produces candidates for apprenticeship. Candidates for apprenticeships preferably must have completed NCV (1-3) or N1 to N4. Notwithstanding the latter, DHESI has reported that they are phasing out some of the NATED programmes as they are not responsive, and the curriculum is outdated (South African Qualifications Authority, 2016). The DTI reports that most practising artisans are unqualified as 46.6% have less than grade 12 and only 32.7% had grade 12 in 2016 (Department of Trade and Industry, 2017). It further states that the Food and Beverages Manufacturing Sector employs 14.6% of artisans in the manufacturing sector, and this is preceded by basic metals sector at 30.9% and textile and clothing sector at 17.7% (Department of Trade and Industry, 2017). The state of education and training in the Food and Beverages Manufacturing Sector is presented in Table 12 (Food and Beverage SETA, 2020a) below. The table presents the training interventions that directly respond to the sectoral priority list and the vacancy demand in the sector. Although skills programmes are the second highest SETA funded training intervention, it focuses more on skills gaps than occupations. The sectoral priority list is limited to the top 10 occupations that are high in demand. However, the SETA does extend this list to include other occupations that are in demand.

Table 10: Implemented Funded Training Interventions over 2018/19 2019/20 & 2020/21

	2018/19	2019/20	2020/21
Bursaries			
Registered	320	249	132
Completed & Achieved	219	139	50
Artisans			
Registered	229	139	368
Completed & Achieved	90	55	74
Learnerships			
Registered	4 167	3 088	3 424
Completed & Achieved	1 660	2 938	1 704

Source: (Food and Beverage SETA, 2020a)

The bursary training intervention is a funding opportunity for students who are interested in occupations within the Food and Beverages Manufacturing sector. Occupations such as engineering manager, and manufacturing operations manager are some of the occupations that require the bursaries. Furthermore, the bursary intervention also caters for occupations that are in high demand in the sector, beyond the top 10-priority list. Commerce, Engineering, Food and Sciences related degrees are funded because occupations in these areas are high in demand (Reddy et al., 2018).

The artisan training intervention directly responds to the demand from the sector for artisans, and to the National Skills Development Plan (DHET, 2019). The programme's registrations generally surpass the completion rate because of the three (3) years it takes to complete the apprenticeship. In response from sectoral demand the SETA focuses on registering Millwrights, Electricians and Fitter apprenticeships. Despite, the low completion rates

reported in the financial years the SETA continues to fund the intervention to respond to South Africa's need for artisans.

Learnerships are the most expedient way of training and transfer of appropriate skills to leaners or employees in the sector (Food and Beverage SETA, 2020a). The intervention offers companies the opportunity of filling occupations that are in demand by giving employees the adequate skills to perform the function of the vacancy. FoodBev SETA qualifications such like FETC: Generic Management (Food Manufacturing Stream), NC: Food and Beverage Packaging Operations and GETC: Food and Beverage Handling Process are some of the most implemented qualifications. It has been found that if a training intervention is effective and efficient the impact is noted by the companies, and it reduces the demand for the vacancy.

The advent of COVID-19 has forced the sector and the SETA to change the way it has engaged in educating and training learners. The SETA recently conducted a survey in order to obtain the training plans during COVID-19 national lockdown. Long distance learning and online classes are the main avenues stakeholders indicated would be used in training. However, technological capacity is a major obstacle with many companies trying to adjust to the new normal.

3.4 SECTORAL PRIORITY OCCUPATIONS LIST

The research detailed above includes various sources from global literature, WSPs, DHESI, and the FoodBev SETA database. The analysis between demand and supply culminates in the identification of the occupations included in the Sectoral Priority Occupations list for 2022/23. The compilation of the Sector Priority Occupations list included the verification of the Hard-To-Fill vacancies list that was done through the analysis of the 2020/21 WSP/ATR and PIVOTAL Plan submissions and literature review. This list is verified according to the relevance of the occupation to the sector and if the SETA could support that occupation. The number of vacancies in the table have been calculated to represent the sector and not only companies that submit WSP/ATR. The calculation is as follows: multiplying total employed in that occupational category by the % of HTFV from Table 10 and divided the figure by 100.

Table 11: Sectoral Priority Occupation List

Occupation	Vacancy frequency
Food and Beverage Factory Worker	156
Millwright	71
Manufacturing Operations Manager	55
Food and Beverage Technician	39
Production / Operations Supervisor (Manufacturing)	35
Fresh Produce Packing Controller	30
Production Coordinator	29
Engineering Manager	22
Health and Safety Manager	15
Industrial Machinery Mechanic	11

The second phase involved the compilation of the final sectorial priority occupations that was presented to stakeholders in interviews and focus groups which were stratified according to the five FoodBev Chambers, with representation of each industry within the chamber. After

the focus groups, interviews and survey input, the list was presented to the Combined Chamber and FoodBev SETA Management meetings before final submission to the Accounting Authority for approval. The focus group participants were mostly employers and industry experts.

The SSP Annexure C, presents the Sector Priority List with the corresponding NQF levels and training interventions. 30% of the occupations in the list are industry specific occupations. The rest of the occupations align to those that have been identified as emerging/increasing occupations in the international food and beverages sector. The numbers to be supported by the SETA are 5% to 10% of specific programme targets, according to the APP. 30% of the list are management occupations which are pitched at NQF level 7, requiring a bursary intervention. The SETA offers bursaries to the employed as well as the unemployed, to get more people into the engineering, safety, and manufacturing positions. The SETA also offers Workplace Experience and learnerships to employed and unemployed learners. The artisanal occupation identified Millwright related training intervention which is apprenticeships. All the interventions are informed by the SETA's training interventions internal system.

There is an observed decrease in the number of artisanal skills needed from the last financial year. The difficulty in filling the top ten occupations is the lack of work readiness demonstrated by candidates. The need for technical skills will be met by allocating more apprenticeships, at minimum NQF Level 4, to increase the supply of technical skills in the sector. However, work readiness programmes should be considered when focusing on new entrants into the industry. A deep dive into the data also reveals the need to train professionals, trade workers and technicians. Merging this with global trends implies training in 4IR skills. This includes data analyst, software engineers and scientist. The skills needs of the SMME are not ignored, as referenced above, the number of SMME's is high within the sector. Program's to grow and support SMME's will be increased. A key influencing factor is COVID-19. The expected impact on digital skills is important.

3.5 CONCLUSION

This chapter reviews the occupational shortages and skills gaps in the Food and Beverages Manufacturing Sector, the extent and nature of supply, and the Sectoral Priority Occupations list. The results of the hard-to-fill vacancy analysis are used to determine the demand of skills. The results illustrate that demand is high for Technicians and Associate Professionals such as Food and Beverage Process Operator and Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers such as Electricians, Millwrights and, Fitters and Turners. This illustrates the need for the FoodBev SETA to aggressively fund occupations that are industry specific to fill these vacancies. A supply side analysis was undertaken which showed that the throughput from school in terms of Physical Science, and Mathematics was enough as a feeder into tertiary education. However, some of the reasons for the supply side problem are the poor quality of matriculants' results and lack of career guidance which limits the number of prospective students. There are interventions that the SETA has been pursuing in improving quality of provision at tertiary level and is explained in chapter five.

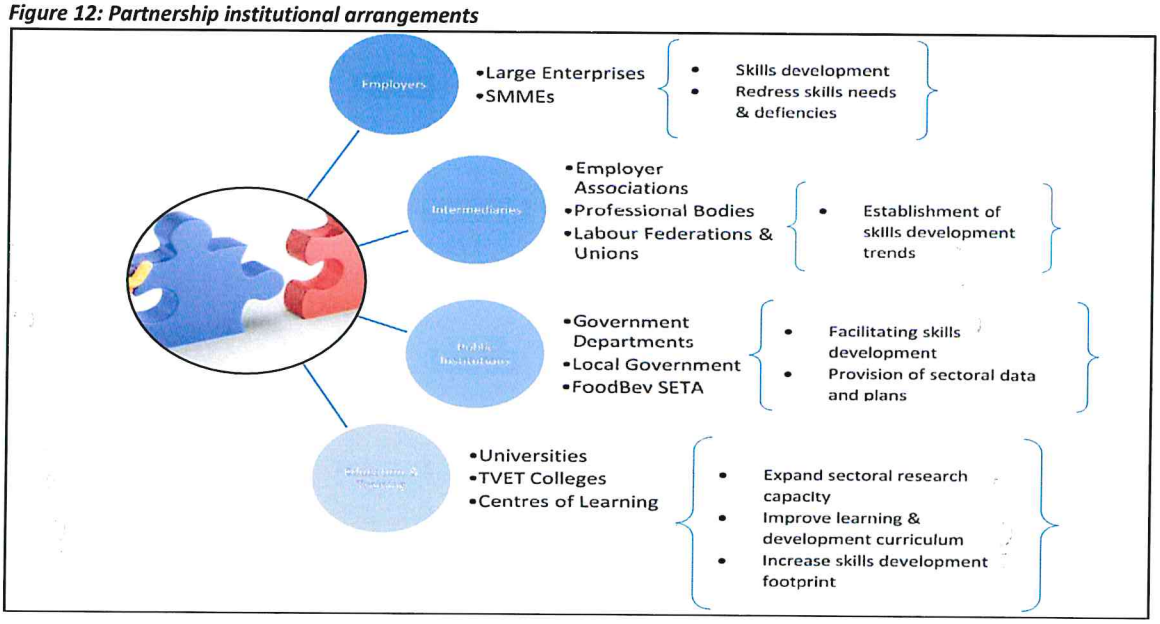
CHAPTER FOUR: SETA PARTNERSHIPS

4.1. INTRODUCTION

The purpose of this chapter is to present existing and new partnerships that the FoodBev SETA has forged to facilitate skills development. The chapter is informed by mixed method that involved desk top research, interviews and a document analysis of the SETA reports. The FoodBev SETA forms its strategic partnerships based on the need of the sector and national priorities as mentioned in chapter two of this document. Further, the NSDP suggests that the FoodBev SETA collaborates through partnerships within the public sector as well as between the public and private sectors to support effective development of skills. Specifically, the NSDP encourages partnerships between the SETAs and TVET Colleges to improve the quality of output of these institutions.

The diagram below seeks to unpack institutional arrangements that will guide the structure of partnerships within the broader skills development sector.

Figure 12: Partnership institutional arrangements



These partnerships with different organisations and institutions in the public and private sector are formed based on the discretion of the FoodBev SETA regarding the need/demand of skills in the sector, the capability and readiness of the prospective partner as well as, the alignment of the proposed partnership to the strategic objectives of the FoodBev SETA. Thus, making it important that the SETA enters into different partnerships with different institutions that will promote skills development. An overview of the current partnerships, successful partnerships, new partnerships and partnerships with other SETAs is highlighted in this section.

4.2. EXISTING PARTNERSHIPS

The FoodBev SETA has several partnerships with different organisations and institutions that are intended to add value to the mandate of the organisation. These partnerships are aligned to the national development strategies and the NSDP outcomes. Below is a table on the current SETA partnerships. The duration of the partnerships differs based on the purpose and type of institution or organisation it is with. Partnerships with universities for funding students

are usually for a maximum of four years, with TVET colleges it is a maximum of two years. The TVET college programmes are between 18 and 24 months long i.e., engineering studies are 24 months and 18 months for business related studies. Partnerships for other purposes for example the development of SMME's, rural and community development or research related projects are usually between 12 months and/up to three years. The table below summarises an analysis of existing partnerships/collaboration between the FoodBev SETA and other organisations in pursuit of skills development.

Table 12:Existing Partnerships

Name of institution/ partner organization	Term and duration of partnership	Objectives of partnership
TVET Colleges (Maluti, Tshwane South, Ekurhuleni West, Ingwe TVET College etc.	Between January 2016 – March 2024	To increase the participation of unemployed youth, capacitate and support TVET Colleges. Through bridging the gap between education and workplace. In addition, it expands the SETA's footprint in TVET colleges
Various Universities (Venda, Sol Plaatjie and Fort Hare)	Between January 2017-December 2021	To address the general skills shortage within the sector through funding learnerships and bursaries. The partnership adds value by supporting Youth Development Programmes.
SAB and Nestle	From 2016 & 2017-December 2021	To provide core skills in organisations through skills training. The latter helps to increase relevant skills available in the sector.
University of Johannesburg	October 2019-March 2022	To establish a Research Chair that will improve research capacity and help identify the skills need for the fourth Industrial Revolution, as well as assist in improve the data managing systems of the SETA that feed into the SSP. The value of this partnership is improved and credible research data and identified skills related to 4IR.
WorldSkills South Africa (WSSA)	April 2017 - Ongoing	To create a platform of sharing and showcasing trade qualifications via competitions and challenges. The partnership helps with the standardisation and the improvement of traditional qualifications within the BRICS countries.
GIBS Business School	End date 31 March 2022	To transform the sector through the increasing the allocation of bursaries for relevant post-graduate studies targeted at African females. The partnership adds value by equipping female candidates with leadership skills to address current industry challenges and to prepare them for future work and to make the industry competitive.
South African Career Development Association; (SACDA)	End date 31 March 2023	To assist the SETA with access to career guidance initiatives. This partnership closes the gaps experienced by the SETA when it comes to accessing career guidance initiatives and practitioners.

The above partnerships are forged and guided in a manner that all involved parties will equally benefit.

4.3. SUCCESSES

The FoodBev SETA has partnership successes to share. These positive events presented in the table below are powerful and useful for illustrating self-awareness of the pros of partnership capability. These events can be used to assess and improve partnerships within the Food and Beverages Manufacturing Sector. The successes below can still be strengthened by further consultation meetings with prospective partners and implementation of a continuous monitoring process.

Table 13: Success stories

SUCCESSES	
• Partnership with the various TVET colleges in providing work-based learning to students so they can complete their studies. • Partnerships with industry (Nestle, Sea Harvest, SAB) where students were funded for bursaries with an aim of providing work experience upon completion, skilling people with disability through provision of learnerships, assisting TVET college with interns funded by both the SETA and industry. • Partnership with the Cereal Science Technology South Africa in the milling industry wherein the FoodBev SETA provided bursaries for 2 PhD students. These students were provided with an opportunity to present their papers to the captains of industry in the baking sub-sector during the milling symposium	• Chinese Culture and International Education Exchange Centre (CCIEEC)- this was a partnership of various universities in China and work experience was given to learners and conducted through various host employers. The project was completed within the planned project timeline. • A collaboration with BRICS Business Council in addressing the skills needs within the BRICS countries and sharing ideas on how to address skills challenges within these countries. The BRICS skills development working group conducts future skills challenges within these countries which assists with creating awareness of the transforming and emerging skills globally and our local learners can participate in these challenges. The SETAs have funded learners who are participating in the future skills challenges in order for the learners to gain experience on future skills and compete with the best within the BRICS community
FAILURES	
• **FoodBev SETA** appointed private providers to assist with placement of learners in different companies, to gain work exposure or to conduct the required internship. Unfortunately, not all learners who entered completed the program and some learners did not start the programs at all.	

4.4. NEW PARTNERSHIPS

The FoodBev SETA has 18 new collaborations/partnerships for overall skills development initiatives as well as those targeted at uplifting the skills of rural and township youth, women and people with disabilities and the impact of the COVID-19 pandemic. In addition to the new partnerships in Table 16 below, there are six (6) proposed partnerships that will focus on the capacitation of career development practitioners, educators, TVET capacitation as well as other priorities of the SETA. These will be responded to through different interventions, including learnerships, skills programmes, placement of graduates in TVET colleges and placement of lecturers in the industry and capacitating them at higher education institutions.

Table 14: New Partnerships

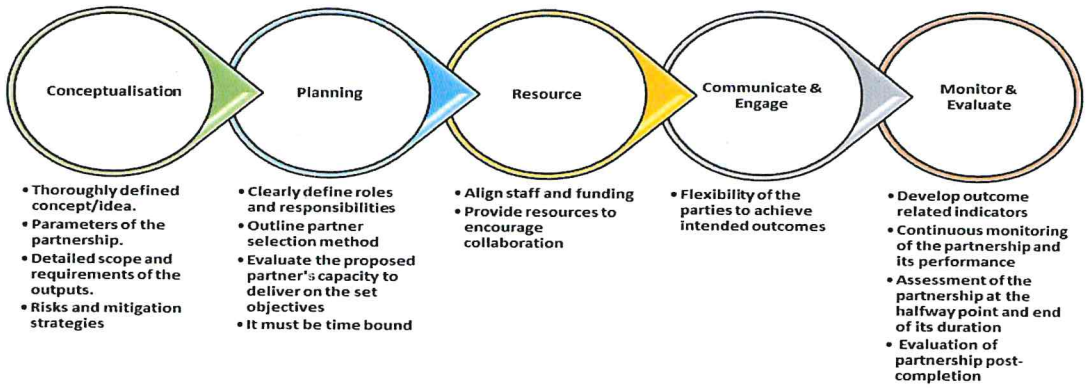
Name of institution/ partner organization	Objectives of partnership
FAWU	To respond to the risk of the Covid-19 transmissions within the workplace.
FEDCRAW	To respond to the risk of the Covid-19 transmissions within the workplace.
NUFBWSA	To respond to the risk of the Covid-19 transmissions within the workplace.
GD & RD Procurement Services	To develop the skills of youth offenders that are due to be released, with a baking and confectionary learnership. The aim is to assist them with integration into the community with some of the skills they will require.
Student Affairs Solutions (SAS)	To develop the skills of the youth in rural and townships, that are interested in the fishing industry.
Rose Mugs	To develop the skills of unemployed learners with disabilities in rural areas.
University of Johannesburg	To conduct workshops that will capacitate the digital skills and knowledge of SMEs from disadvantaged areas within the food and beverages manufacturing sector.

Elgin Community College	To develop the skills of the youth and women who own or wish to own small businesses within the Overberg District Municipality.
Asime Women NPC.	To develop the skills of rural and township youth and women who are focusing in agro-processing businesses and other small businesses within the sector, within different Municipalities in the eThekwini district.
Bakery Incubation Centre of South Africa (BICSA)	To support SME's and cooperatives in the rural and township communities with a skill set that will open entrepreneurship opportunities.
Sea Harvest	To develop the skills of the youth and entrepreneurs in the Northern Cape: North Pollock municipality with sea going skills and develop their entrepreneur skills
Department of Higher Education and Training (DHET)	Support the annual heritage Career Expo that showcases and celebrate the hidden vast wealth of ancient trade/skill within the food and beverage manufacturing sector.
The National School of Government	To develop the skills of FoodBev SETA employees through management and executive development programs.
Free State Education Trust	Orientation and capacitation of 250 Life Orientation / Life Skills Teachers and grade 10 – 12 Maths and Science Learner Programmes.
Universities South Africa (USAF)	To fund the missing middle and historical debt students from various previously disadvantaged universities

4.5. PARTNERSHIP APPROACH

The FoodBev SETA's most successful approach to partnership is informed by a structured strategic approach to effective collaboration that leads to the development of a partnership programme which considers the following key components as follows:

Figure 13: Partnership Approach



The above approach presents previous and currently partnerships model implemented by the FoodBev SETA to identify potential partnerships, manage existing partnerships and to secure new partnerships.

4.6. CONCLUSION

In conclusion, this chapter allowed the FoodBev SETA to re-examine its existing partnerships for different training interventions within the sector. It is through such initiatives of this magnitude that the FoodBev SETA can concretise collaboration with PSET institutions. Regarding PwD partnerships, further interventions will be done by the SETA to drive awareness in the sector on disability and work on strategies to assist employers with getting declarations from their employees. Lastly, the SETA will continue to seek more value-adding partnerships to address the findings of the SSP.

CHAPTER FIVE: SETA MONITORING AND EVALUATION

5.1 INTRODUCTION

Chapter 5 reflects on monitoring and evaluation within the SETA. The purpose of monitoring and evaluation (M&E) is to measure organisational efficiency through tracking and impact assessment. Furthermore, M&E assesses the quality, value, productivity and impact of skills development interventions and research. Furthermore, it provides an action plan to support future strategic priorities. The increased focus on M&E capacity and effort is a necessity to determine the relevance, credibility and value of skills development interventions funded and facilitated by the FoodBev SETA. M&E supports organisation-wide learning and is a key element to planning, implementation, and continuous improvement. This chapter is mostly informed by the document analysis done on the SETA planning documents, research reports and Annual reports.

In 2009 the Department of Planning, Monitoring and Evaluation (DPME) published the Policy Framework for the Government-wide Monitoring and Evaluation System (GWMES), which defines monitoring as 'the continuous collecting, analysing and reporting of data in a way that supports effective management. It usually reports on actual performance against planned or expected.' The DPME further defines evaluation as 'the systematic collection and objective analysis of the evidence on public policies, programmes, projects, functions and organisations to assess issues such as relevance, performance (effectiveness and efficiency), value for money, impact and sustainability, and recommend ways forward'. Mainly, monitoring aims to track whether an intervention is implemented as planned and evaluation determines whether the intervention is the best possible solution to achieve the desired result. The success of M&E thus begins in the planning phase by expressing explicit outputs, outcomes and desired impact, and supports the strategy in providing robust reflections on past results. The National Evaluation Policy Framework (NEPF) further distinguishes between six types of the evaluation presented in the table below.

Table 15: National Evaluation Policy Framework - Types of evaluations

Type of evaluation	Description
Diagnostic	Preparatory research to ascertain the current situation prior to an intervention and to inform intervention design. This enables the drawing up of the theory of change before the intervention is designed.
Design	Used to analyse the theory of change, inner logic and consistency of the programme, either before a programme starts or during implementation to see whether the theory of change seems to be working.
Implementation	Aims to evaluate whether an intervention's operational mechanisms support the achievement of the objectives or not and understand why.
Impact	Seeks to measure changes in outcomes, whether an intervention should be continued or not, and if there are any potential modifications needed.
Economic	The economic evaluation considers whether the costs of a policy or programme have been outweighed by the benefits.

Source: (Department of Planning, Monitoring and Evaluation, 2010)

The GWMES and NEPF provides a foundation and minimum expectations in terms of M&E in the public sector, and thus form the basis for the function within the FoodBev SETA. The SETA developed an M&E framework to formalise its approach and to ensure compliance to and

alignment with and the high-level framework for M&E in the SETA environment, which is aligned to the GWMES, and NEPF.

5.2 Current FoodBev SETA approach

The NSDP proposes that the resolutions of national priorities and the demands of the labour market be interpreted into appropriate interventions from education and training institutions. FoodBev SETA uses M&E to ensure that plans translate to desired outcomes and impact. The SETA adopts the Result Chain Logic Framework for M&E, as indicated in the schematic diagram below. The process starts with a planning phase that includes deliberations on inputs and the activities/interventions to implement for the delivery of the SETA mandate right up to the desired outcomes and impact. The planning process followed is then monitored and evaluated using a two-fold approach to M&E, which focuses on implementation progress through the monitoring of activities which include external moderations and site visits, and evaluation of outcomes and impact through research studies.

***Figure 14*: FoodBev SETA value chain and application of M&E**

Monitoring of any function with the SETA, starts within the department responsible for the task. Additional monitoring activities serve as internal controls aligned to areas of highest risk and is performed, in part, by the FoodBev M&E department. These monitoring activities relate predominantly to verification of compliance requirements associated with FoodBev SETA discretionary grants and could be expanded in support of the internal audit function. Additionally, the M&E unit will analyse, evaluate and validate information. External moderation site visits conducted by contracted subject matter experts aim to monitor the quality and standards of learning programmes before and during implementation and to verify results. The activities of the M& E Unit now include the evaluation of activities of the FoodBev SETA which include evaluation and impact assessment studies. The research agenda is approved by the FoodBev SETA's Accounting Authority annually and includes the compilation of a credible SSP and various evaluative research studies with a focus on diagnostic and impact assessment.

5.3 THE ROLE OF M&E IN RESEARCH AND PLANNING

The FoodBev SETA research agenda constitutes a diagnostic evaluation of the sector and its skills requirements and impact assessment of various skills development interventions. Monitoring focuses on quality of programmes and progress against plans. Results and reports produced inform strategy, planning, implementation and reflection. The cycle of M&E aligns with the core SETA business process to achieve credible results and continuous improvement.

The objectives of the FoodBev SETA and M&E, at a sectoral and national level, are directed by analysis and consideration of data, findings and trends. Strategic plans derived in response to previous M&E observations and conclusions are subjected to further scrutiny to assess the achievement of outputs and impact, and results used in further planning. The findings and observations from M&E also inform the FoodBev SETA research agenda to determine the effects of past interventions, identify gaps and shortcomings as part of improvement efforts,

and to scope external factors which present potential opportunities or its detrimental impact to current initiatives.

Findings and observations emanating from M&E are a valuable tool to inform strategy and planning and direct future research topics and questions. Successful programmes can be continued and improved, and areas of concern addressed going forward.

5.4 Previous strategic priorities

FoodBev SETA responded to the identified priorities which include *Addressing Artisan Shortages and Development*; Improving Quality *of Provision of Matriculants' and Graduates into the Food and Beverages Manufacturing Sector; Transformation; skills gaps; boost Innovation through Research various learning programmes in the sector and Career Guidance.* The priorities are achieved through the various SETA interventions including learning programmes which were achieved and exceeded in the 2020/21 financial year which were achieved and exceeded in the 2020/21 financial year. Learners funded through the work experience, bursary and artisan grants successfully completed the programmes with an increased awareness of the available careers in the sector for the youth through career exhibitions and guidance in the rural and urban areas despite COVID 19. However, the SETA has showed slow progress in growing participation and capacitation of the small businesses within the sector due to the lack of compliant applications received from the targeted entities for the two funding windows that were opened. Therefore, this continues to be of great priority in response to the strategic priorities identified in the SSP.

The FoodBev SETA did not conduct tracer and impact studies in the previous financial year but has embarked on an impact study in the 2021/22 financial year. However, the research done in 2020/21 was responding to the identified strategic outcomes included in the SP which aimed to identify specific areas of focus concerning our stakeholders and beneficiaries. The research projects that will be used to inform planning include the Skills of the future: Digital Predictive Framework, Skills development for Small Medium Enterprises, with a specific focus on the youth, Analysis of Impact of COVID-19 on the Food and Beverages Manufacturing Sector and a TVET Study on the Impact of the SETA interventions and Readiness of the TVET system to train and educate beneficiaries. The main findings from the studies were:

- Skills of the future: Digital Predictive Framework: As part of the project a digital framework was developed to assist the SETA with a forecasting of future skills in the sector. Further the findings indicated that future skills need to be contextualised to a particular region and in SA skills relating to digitisation, artificial intelligence, innovation, entrepreneurship soft skills etc. were found to be on the rise in the near future.:
- Skills development for Small Medium Enterprises with a specific focus on the youth: This study revealed that the FoodBev SETA comprises 93% of SMEs. Demand driven skills, followed by work-based learning are identified as priority for SMEs. Government support and access to technology were also identified as key enablers to SME sustainability in SA. The survey highlights the removal of bureaucracy.
- Analysis of Impact of COVID-19 on the Food and Beverages Manufacturing Sector- The research was conducted to evaluate the impact and responses by our stakeholders to Covid-19. The findings highlight a great need for companies to implement a hybrid training system, invest in technology, introduce digital supply chains, and participate in local supply chain systems.

- TVET Study: Impact and readiness: The study revealed that 83% of employers support the inclusion of soft skills in the TVET curriculum as they believe that soft skills will improve graduate effectiveness in the workplace. The study found that there is a high turnover in the sector. FoodBev trained learners find employment in other industries. Lastly, a Systems Dynamics Model is set up which will be used to simulate different scenarios that will give direction as to where the SETA should invest.

In conclusion the research has given insight on the needs of the sector and direction to the SETA as far as areas of focus are concerned. The SETA will consider the recommendations from these studies in the development of the annual plans. Reflecting on the priority of transformation, past efforts have resulted in correcting some of the imbalances over time. There is, however, still inequality at the management level, which require a focused and specific skills development approach. A great deal has also been done to increase research and innovation and career awareness, but the impact of this is not clear. Future M&E efforts will need to determine the value and implications derived from these efforts and should also investigate and propose improvements where required.

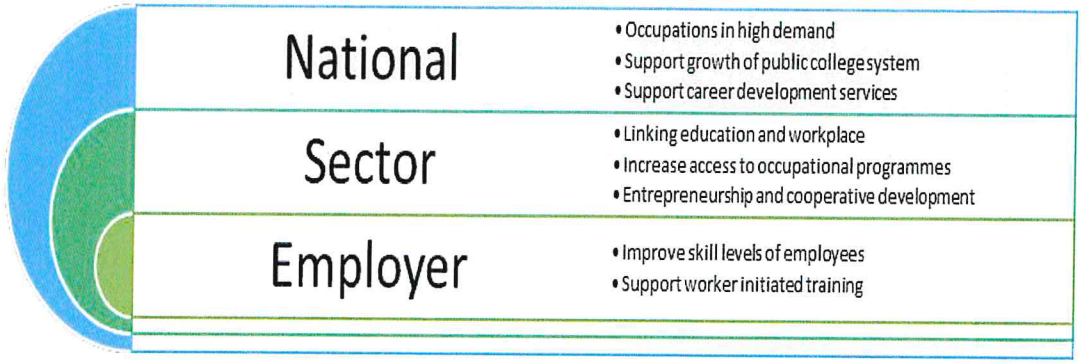
From both quantitative and qualitative perspectives, strategic objectives have been realised but can be improved. Research findings have also resulted in the need for further exploration of funding requirements, SME participation objectives, and the quality of programme content. These will be addressed in future to inform planning and further continuous improvement. The six priorities continue to be focus areas for the SETA in the 2021/22 financial year.

5.5 Plan of action

There are areas within the FoodBev SETA Monitoring and Evaluation Strategy that can be strengthened. The latter includes the clarifying of roles and responsibilities in the M&E value chain across departments that should be made more explicit. The historical ETQA functions form part of the M&E value chain, and this has been reviewed within the context of the QCTO, the draft Framework for M&E from the DPME, and the NSDP. A revised organisational structure was approved by the Board in March 2020, resulting in the merging of the research, planning, monitoring and evaluation functions. The structure came into effect on the 01st of April 2021 and will be implemented in phases during the year. The implementation of the structure comes with accurate monitoring and evaluation functions in the organisation. The officials tasked with these activities will focus on the proper delivery of the M&E mandate.

Effective monitoring and evaluation start with effective planning and the approved M&E framework will assist the SETA along that path. Further, site visits conducted by the SETA will include an evaluative perspective of the programmes. Performance information management has been moved to the approved M&E unit. This will assist with better monitoring of performance against the planned targets as monitoring will act as an internal control measure of the SETA. The skills needs of the sector can only be anticipated and addressed if correctly identified and if relevant interventions are crafted in response. Indicators and targets must be in support of the outcome and impact statements, and M&E plans and efforts should align accordingly. The outcome and impact statements of the FoodBev SETA were aligned with the eight outcomes specified in the NSDP. These outcomes will have to be addressed at an employer, sectoral and national level as per the diagram below.

Figure 16: **NSDP Outcomes**



The FoodBev SETA M&E plan and activities have been crafted to support planning and implementation not only in the short term but also the medium term. Evaluation activities are balanced between areas of high risk, new interventions, and the testing of old assumptions. In response to this, the short to medium term FoodBev SETA M&E operational plan contains diagnostic, impact and economic evaluations to inform future planning and participation. Improvement plans will be developed based on the evaluations conducted and their implementation will be closely monitored. The M&E plan is integrated with the FoodBev SETA M&E Framework. The M&E Framework was approved by the Board in March 2020, and an associated five-year strategy and annual operational plans will support the function as required by the Revised Framework for Strategic and Annual Performance Plans.

5.6 Conclusion

This chapter introduced the current M&E approach within the SETA, identified the strategic skills priorities of FoodBev SETA and reflected on their previous achievement levels, as well as areas of improvement for the achievement of specific priorities that have challenges. The suggested measures include the theory of change which promotes an outcomes-based M&E approach, expansion of current M&E activities and formalising this through the establishment of a strategy and concrete plans aligned to DPME standards and guidelines. Findings to date, through research and M&E activities, have highlighted successes and areas of improvement considered in addressing the skills needs of the sector at an employer, education institution, sectoral and national level. These can be strengthened in future to provide a more holistic and detailed view of past, present and future skills development strategic objectives and plans.

CHAPTER SIX: SKILLS PRIORITY ACTIONS

6.1 INTRODUCTION

This is the final chapter which recapitulate the main findings from the preceding chapters and suggest skills priority actions premised on these findings. Finally, the chapter also considers measures to support national policies and plans.

6.2 KEY FINDINGS

The key findings based on the previous chapters are:

Chapter One: The Food and Beverages Manufacturing Sector has remained quite steady in its growth patterns however the lack of transformation is still an issue. The sector is the highest contributor to GDP, in the manufacturing sectors. It has showed a relatively stable employment rate, with a drop in 2020, (year to year WSP Data). WSP submission rates have steadily increased. However, the chapter has showed that Africans and particularly African females still lag other racial cohorts in relation to managerial positions. A positive trend is the increase of Africans in the professional category. The impact of COVID-19 on the sector is discussed in detail. Furthermore, chapter one reveals the current employment of people with disabilities sits at 0.061% and it still falls substantially short of the 4% target. The skills development programmes should continue to target African females and disabled people in the sector to improve the transformation goals.

Chapter Two: The chapter identified various change drivers within the sector. Global competitiveness, health and nutrition, technological advancements, climate change and food safety were cited as significant change drivers in business operations. The most significant being technological. These factors, amongst others, have forced business to change the way it operates to accommodate prevailing changes. To deal with factors like climate change, technologies, globalization and food safety companies must continually train employees to adapt to the changing landscape. The common thread is the development of technological skills. Furthermore, research and innovation are important in developing the sector and promoting business interests beyond South Africa's boarders, research skills is among the fastest growing skills. The general anticipated impact of COVID-19 is expected to be significant and would affect all change drivers and business skills linked to each driver.

Chapter Three: The shortage of professionals and industry specific occupations in the sector captured in the chapter are derived through an analysis of demand and supply of skills. The Manufacture of breakfast products chamber does not participate in programs. Short learning programs seems to of been the choice for 2020/21. 4IR skills is a distinct priority as highlighted by over 80% of responses in the HTFV list. The matric pass rates for 2020 were lower than usual while tertiary throughput remained steady. Consequently, bursary provision to high potential students who are eager to enter the sector should be pursued. Skills of the future must be considered such as AI, analyst and data related skills.

Chapter Four: FoodBev SETA as a skills partner in education and training has expanded its collaborations with multiple private and public entities ranging from TVET and CET Colleges to local municipalities, Universities, World-Skills SA, QCTO as well as employers such as SAB, SACGRA, amongst others. These organisations have entered into partnerships with FoodBev SETA for the implementation of various skills development projects. In this SSP, priority will have to be given to partnerships that support SMME's and those that are focused on dealing with the impact of the COVID-19 pandemic.

Chapter Five: The chapter identified the FoodBev SETA's Monitoring and Evaluation model is that is in place to ensure that the plans of the SETA translate to the desired outcomes and

impact. FoodBev employs a two-fold approach to M&E (i.e., Annually through AR and APPs as well as, the M&E of training interventions/learning programmes during and post the implementation of training interventions or learning programmes. The chapter also discussed the previous strategic priorities of the SETA, areas of improvement as well as the adopted improvement plan.

6.3 RECOMMENDED ACTIONS

Below are areas that need to be addressed and require further robust deliberation. These areas are linked to the main findings as presented above.

6.3.1 Addressing Artisan Shortages and Development

The FoodBev SETA continues to assign higher targets for the training of Artisans, especially Millwrights in the sector. The demand for engineering managers and health and safety skills have increased in alignment to the more technical and health requirements. The demand for Fitter and Turners as well as Electricians has slightly decreased in the Food and Beverages Manufacturing Sector, but the demand remains high within the entire manufacturing sector. Digital skills must be expanded across all categories as this is clearly highlighted.

A multi-pronged strategy is recommended to alleviate the scarcity of all skills in the Food and Beverages Manufacturing Sector. This strategy includes forming partnerships with industry and TVET colleges, wherein industry provides the required work experience and colleges provide academic support. Further partnerships will be formed with entities that specialise in the development of artisans with a focus on the employability of and unemployed apprenticeship. The latter relates to the high number of unemployed qualified Artisans and SETA will continue to fund RPL interventions to those who have the experience but lack the qualification to be an artisan and so forth.

6.3.2 Improving Quality of Provision of Matriculants' and Graduates into the Food and Beverages Manufacturing Sector

It is recommended that the FoodBev SETA promotes and funds significantly more bursaries for the sector. The SETA must target varsity students who have performed remarkably well, particularly in Maths and Science to enter the Food Science and Technology learning programmes (including analyst, AI and data science). Currently, there is very little emphasis placed on bursaries for matriculants' to get into tertiary education. Placing more emphasis on bursaries into Food Science and Technology could potentially produce more industry specific occupations in the long run.

6.3.3 Transformation

Transformation is a strategic focus area for the FoodBev SETA. In the current financial year, the SETA has partnered with a reputable institution to deliver a Leadership Development Programme to address the identified management skills need in the sector. The FoodBev SETA will consider increasing the allocation of bursaries for relevant post-graduate studies targeted at African females. An increase in bursary allocations for post-graduate studies will ensure a pipeline of highly skilled females who have the necessary skills to occupy higher positions. In addition, the FoodBev SETA needs to focus on equipping middle and senior management in food and beverages companies with the requisite managerial skills through other forms of training interventions. In relation to disability the FoodBev SETA should continue to set aside

a special grant ring fenced for the training needs of disabled people to augment their presence in the Food and Beverages Manufacturing Sector.

6.3.4 Assist the Sector to boost Innovation through Research.

The FoodBev SETA awards bursaries towards Masters and PhD studies in research and innovation to encourage innovation in the sector. International and National Conferences/Seminars as well as Webinars are also a means by which the SETA strives to boost innovation in the sector. Participation in the latter helps FBS keep abreast of any new developments in the sector. Further, the need for innovation in sector is reinforced by the current impact of the COVID-19 pandemic. The skills implications identified in the change drivers are also addressed through responding to this priority through the support of innovative projects, bursaries that respond to the skills and occupations that have been identified.

6.3.5 Skills Gaps in the Sector

Generic management skills, numeracy, literacy, soft skills and industry specific knowledge skills have emerged as significant skills gaps in the sector. The SETA has various training interventions that can address management skills, industry specific knowledge and some soft skills. However, the sector may not know what programmes the SETA funds and it may be beneficial to share with industry the different programmes the SETA funds. This would ensure that employers are knowledgeable about the programmes the SETA funds. In addition, it would assist in tackling some of the skills gaps found in the sector. The SETA could keep the sector abreast of the learning programmes it funds. Lastly, the SETA will start engaging the sector regarding the impact of COVID-19 and the 4IR skills identified in literature to prepare and guide towards the changes that need to and that will start happening with the required job occupations. Some of the skills gaps emanating from the change drivers include expertise in Research and development, Material science engineering and Packaging technology which will be addressed through the various interventions the SETA already offers, namely, bursaries and focused partnerships that will respond to these needs.

6.3.6 Career Guidance

Career guidance has emerged as an issue expressed by stakeholders in the broader sector as a reason for graduates not entering the Food and Beverages Manufacturing Sector which results in a shortage of suitable recruits for the sector in tertiary institutions. More aggressive marketing needs to be undertaken by tertiary institutions, industry and the FoodBev SETA. Career exhibitions, that also include areas of study that support the identified skills as a result of changed drivers need to reach matric learners to allow informed decisions regarding the courses chosen at tertiary level. In this way, the FoodBev SETA jointly with industry could highlight core and scarce occupations in the Food and Beverages Manufacturing Sector, as well as showcase the differences.

6.4 MEASURES TO SUPPORT NATIONAL STRATEGIES AND PLANS

The primary measures that could be pursued by the FoodBev SETA to support national strategies and plans are:

- To form partnerships that respond to the South African Economic Reconstruction and Recovery Plan to expand on the current programmes that the SETA supports which are

linked to the ERRP. Therefore, the SETA will increase focus on Skills programmes, bursaries and learnerships that cover areas that respond to the plan.

- To form partnerships with rural universities to fund students registered in qualifications linked to hard-to-fill occupations.
- Partner with relevant institutions on mutual skills development areas such as Learnerships and Artisan training.
- Training of women owned rural cooperatives to upgrade themselves from subsistence to commercial.
- Support of TVET Colleges through capacity building projects to improve the quality of graduates and bridge the gap between the suppliers (Colleges) and the consumer (sector).
- Provision of funding to projects that are aligned to IPAP, APAP and RAVAC.
- The implementation of the SMME toolkit to assist small companies in the food and beverages sector to cushion the adverse costs associated with complying with health, safety and quality standards.
- Partnerships with public and private institutions to address skills needs through the provision of relevant training.
- Improve turnaround time for awarding and paying bursaries.
- Training programmes of the FoodBev SETA should focus more on the rural and township economy, specifically supporting cooperatives and SMME's.

6.5 CONCLUSION

This chapter concluded the SSP by covering the key findings and associated areas that need to be addressed. These areas however need to be deliberated further to ascertain the resources, timeframe and conduit of implementation which will occur during the strategic planning process ahead of the finalisation of the Annual Performance Plan and Strategic Plan for 2021-22. In so doing, this will give the Food and Beverages sector a clear direction in the implementation of its strategy in the enhancement of the sector.

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