2021/2022

SECTOR SKILLS PLAN

FOOD & BEVERAGE MANUFACTURING

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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Ms. Nokuthula Selamolela

Chief Executive Officer

Date: 31 August 2020

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Mr. Alan Campbell

Chairperson of the Board

Date: 31 August 2020

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CHAIRPERSON'S FOREWORD

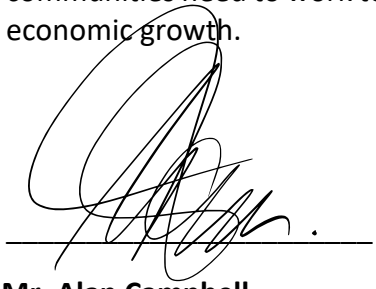
The Food and Beverages Manufacturing SETA (FoodBev SETA) is pleased to present its 2021/22 Sector Skills Plan (SSP). The SSP seeks to implement the National Skills Development Plan (NSDP), which came into effect on 1 April 2020.

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, and 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 Department of Higher Education and Training (DHET).

The alignment of the document'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 will be validated through qualitative methods, which will be 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

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 DHET 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 2020/22 SSP is compiled using a mixed method approach, which includes both quantitative and qualitative methods. During this process, the SETA considers the impact of the COVID-19 pandemic, which came as a disruption and changed "normal" operations within the SETA and the sector. Further to this, the institution of the national lockdown by the government resulted in a levy payment holiday, impacting the SETA's ability to respond to skills development needs in the sector. This payment holiday resulted in the revision of performance plans to mitigate the resulting cash flow risk.

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 the statistical analysis of data gathered from WSP's/ATR and PIVOTAL plans, interviews, virtual focus groups via the Microsoft Teams platform and a survey. 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 (2010-2019), SARS and WSP/ATR data. These reports highlight the following: total sector turnover of R61.95 billion; volume contribution to total manufacturing is 26.6%; gross value add is 22%; the manufacturing sector GDP contribution is 15.7%; and the food and beverages manufacturing sector trade deficit is R20,35 billion. Africa has been superseded by Asia, since 2014, as the largest in food exports. The levy downloads (2019/20) highlight that there are 13 987 registered companies of which 2 387 (17%) are levy paying companies. The sector is made up of employer companies distributed as follows: large companies 535 (4%), medium companies 385 (3%) and small companies 13 067 (93%). The distribution of companies per chamber is as follows: Food Preparation Products Chamber at 47% Production, Processing and Preservation of Meat Fish, Fruit, Vegetables, Oils and Fats Chamber 30%, Manufacture of Beverages Chamber at 12%, Manufacture of Dairy 10%, and the Manufacture of Breakfast Products Chamber 1%.

The sector employs a total of 256 344 employees. The Food Preparation Products Chamber has the highest share of employees at 47%, Manufacture of Beverages chambers 28%, Production, Processing and Preservation of Meat, Fish, Fruit, Vegetables, Oil and Fats at 22%,

Manufacture of Dairy Products at 13%, and Manufacture of Breakfast Products chamber at 0.4%. 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 60% of the workforce. White males are dominant at the manager level, but the number of African Female managers increased by 18% in comparison to 2019. Present trend of Africans occupying elementary occupations relative to management occupations continues. FoodBev SETA received a total of 768 WSP/ATR applications, with the Manufacture of Food Preparation Products Chamber submitting the highest applications at 50%. People with disability comprises 0.6% of total employed. Provincial distribution of companies indicates Gauteng at 26%, Western Cape at 26% followed by KZN at 15%. 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 COVID-19 pandemic.

Chapter three reviews global literature 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 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 has 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/managers/technical (4IR).

- 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; this feeds into the professional skills required and potentially into the skills of the future.
- Transformation: Increase the number of bursaries awarded 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 Master's 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), 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 2020/22 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 and Pivotal Plan datasets with triangulating with other sources. Other sources include surveys, literature review, 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 2019/20 WSP/ATR data, surveys, economic and labour trends as reported by Statistics SA and the Department of Agriculture, Forestry and Fisheries (DAFF).
- 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 was the entire database of the SETA. An 80% accuracy rate and 10% confidence rate were established for the findings of these tools. The findings of the latter methods were reinforced with the COVID-19 impact study.

To verify the Sectorial Priority Occupations list, virtual focus groups and interviews were 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 DHET list. The list is verified to ascertain whether the identified occupations are linked to any change drivers in the sector. This is also verified against the national priorities and strategies. The top 10 Hard to Fill Vacancies are 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
TRACER AND IMPACT STUDY ON BENEFICIARIES OF THE FOODBEV SETA BURSARY PROGRAMME (2012/13 -2016/17)	Quantitative and Qualitative	FoodBev SETA commissioned a study aimed at tracing and accessing the impact of the FoodBev Manufacturing SETA bursary on beneficiaries from 1 April 2012 to 31 March 2017	• Face-to-face Interviews • Online surveys • Desktop research	The study's population consisted of: • 843 bursary beneficiaries • 33 Company representatives The study focused and was limited to students funded between 1 April 2012 to 31 March 2017.	• FoodBev SETA Bursary Learner Reports, • Companies Skills Development Facilitators	April 2019 – February 2020
TRACER AND IMPACT STUDY OF THE FOOD AND BEVERAGES MANUFACTURING SETA-FUNDED INTERNSHIP PROGRAMME	Quantitative and Qualitative	The purpose of this study is to track the whereabouts of the graduates who completed the internship programme by the end of March 2018	• Face-to-face Interviews • Online surveys	The study's population consisted of: • All the interns who completed the program at 2017/18	• FoodBev SETA Internship Learner Report	April 2019 – February 2020
NEEDS ANALYSIS: RECOGNITION OF PRIOR LEARNING IN THE FOOD AND BEVERAGE MANUFACTURING SECTOR	Quantitative and Qualitative	The study aimed to determine the need and ability to implement the Recognition of Prior Learning Programme in the Food and beverage manufacturing sector	• Face-to-face Interviews • Online surveys	The study included the entire population 313 company stakeholders	• Stakeholder database	April 2019 – February 2020
REASONS BEHIND THE CANCELLATION OF DISCRETIONARY GRANTS PROVIDED BY THE FOOD AND BEVERAGES MANUFACTURING SETA	Quantitative and Qualitative	The study aimed at determining the reasons behind the cancellation of Discretionary Grants	• Face-to-face Interviews • Online surveys	The study included a total population of 31	• Cancellations data base of 2016/17 • Terminations data base of	April 2019 – February 2020
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.	• Stakeholder database	May 2020 – July 2020

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 include: literature review of the sector; the analysis of 2019/20 SETA data; SARS data; economic and labour trends as reported by Statistics SA; SETA existing reports; interviews with industry experts and 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 introduced. 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 as it contributed 15.7% of annual GDP in 2019, an increase of 1.7% in comparison to 2018 GDP contribution (Statistics SA, 2018) (Statistics SA, 2020a). Food and beverages manufacturing is a core economic activity in South Africa, with a volume contribution of 26.6% (Statistics SA, 2020b) to the total manufacturing activity. The food and beverages manufacturing employee numbers increased from 243 986 in 2018/19 to 256 344 in 2019/20 (SARS 2020). This results in FoodBev accounting for 21.1% of employment in the Manufacturing Sector in 2019, an increase from 20.1% in 2018 (SARS, 2020). 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, 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 which comprises 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

FoodBev SETA Board has approved the changes proposed in the constitution of the Chambers in order to align these to the promulgated gazette of DHET (DHET, 2010)[1] and to ensure that the Chambers are properly defined and are a good reflection of the industrial activities in the sector.

The Food and Beverages Manufacturing Sector is made up of 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 indicated in the Gazette issued 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**	

[1] This gazette provides for the establishment of the SETA and its respective sectors.

Category	SIC Code	Constituency
	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	
	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 GAZETTTE 33756 (2010)[2]

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)	DHET 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. DHET 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.

[2] 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
	Federal Council of Retail and Allied Workers (FEDCRAW)	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.
	National Union of Food Beverage Wine Spirits and Allied Workers (NUFBWSAW)	
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)	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.
	Technical Vocational Education and Training (TVET)	
	Universities and University of Technology	
Industry Associations		
Confectionary		South African Sugar Association South African Bee Industry Organisation
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 Toothfish 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

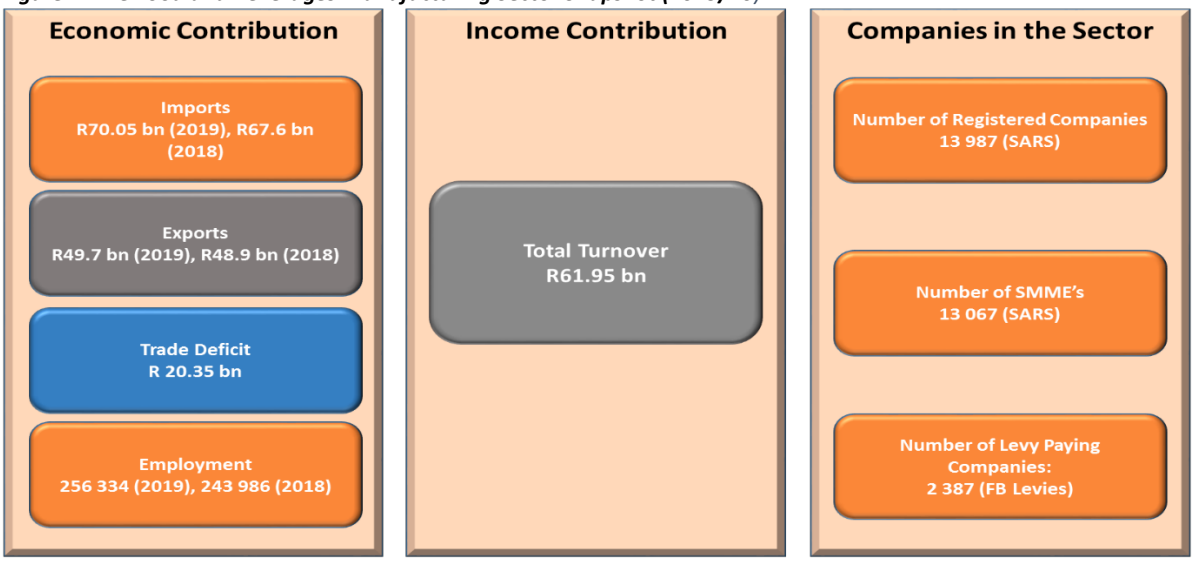
Type of Organisation	Name of Organisation	Role in relation to NSDP
		SA Wine Industry Information and Systems (SAWIS) VINPRO Sustainable Wine South Africa (SWSA) Wine and Agricultural Ethical Trade Association (WIETA
Beer & Malt		The South African Liquor Brand Owners Association (SALBA) South African 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

***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.

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. The short, medium and long-term impact of COVID-19 is to be confirmed. 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 (2019/20)



Source: Statistics SA (2019) and SARS Levy downloads (2020)

1.4.1 Overview of Key Economic Indicators

The Food and Beverages Manufacturing Sector is one of the largest sectors in the manufacturing industry, contributing 26.6% of manufacturing production volumes (Statistics SA, 2020b). The Manufacturing sector in SA comprises 10 contributors as illustrated in Figure 2. The FoodBev sector is the third largest contributor to revenue in the manufacturing industry, having a 0.6% increase to 17.4% in 2019 as compared to 2018. It is the largest weighted contributor to the manufacturing industry at 26.6% for the 2017-2020 period. All the food groups had a good year, in particular 'other' food (including sugar), dairy, and meat, fish and fruit (Statistics SA, 2018). Driven by the rise in population, the demand for food and beverages is expected to increase in coming years. The potential of COVID-19 in reversing this trend is significant as elaborated in section 1.4.2.

Figure 2: Food and Beverages weighted contribution and distribution by revenue

Source: Statistics SA, 2020c; and Stats SA (2020)

1.4.2 COVID-19 within the Food and beverages Manufacturing Sector

In March 2020, the national government declared a state of national disaster and put in place a national lockdown in response to the Coronavirus (COVID-19) pandemic. The national

lockdown became effective on Thursday 26 March at midnight. The lockdown was to end on Thursday 16 April at midnight, however due to a rise in new infections, it was extended to the 30th of April 2020, and continued to be extended until 15 September 2020 (Department of Cooperative Governance and Traditional Affairs, 2020).

The declaration made by the government brought about the implementation of the Disaster Management Act, 57 of 2002. In terms of Regulation no. 398 of the Disaster Management Act, agriculture and food supply are declared as essential services during the pandemic (South African Government, 2020). This means that the entire food value chain, from farm-related operations, agro-processing and food manufacturing, logistics and related services, wholesale and retail services, and all support functions that ensure efficient delivery of the agro-food system had to be functional to ensure that there is access to sufficient, safe and nutritious food (South African Government, 2020). The South African COVID-19 Risk Adjusted Strategy stipulates that as the production, processing, packaging and distribution of food continues, all COVID-19 health and safety protocols must be adhered to. The latter includes observance of guidelines for social distancing, sanitation and hygiene, and use of appropriate personal protective equipment, like cloth face masks, as determined by the National Department of Health (Department of Cooperative Governance and Traditional Affairs, 2020).

Based on COVID-19 studies, it is clear that 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. Rasool (2020:13) reports that the food and non-alcoholic beverages companies have experienced a moderate decline in income (-10% to -30%), whereas alcoholic beverages companies have experienced significant impacts, an income decline of -60%. Further, Anderson et al. (2020) argues that the potential for significant interruption in the activities of the sector cannot be ignored. Based on a comprehensive review of current reports and literature, virtual focus group discussions and COVID-19 impact survey conducted by the FoodBev Seta, this document now presents the impacts of the COVID-19 pandemic, with a focus on issues affecting food and beverages manufacturing.

Beyond its health impacts, the COVID-19 pandemic is impacting the functioning of the South Africa's Food and Beverages Manufacturing sector. Data from the COVID-19 impact survey demonstrate that all sub-sectors have been impacted to some extent by the COVID-19 pandemic (FoodBev SETA COVID-19 Survey Report, 2020). Although, at present, the long-term impacts of COVID-19 are uncertain, some companies (in particular small and medium enterprises) would likely close due to COVID-19 lockdown (COVID-19 Survey, 2020). This calls for urgent response to support companies in the sector. Furthermore, the COVID-19 pandemic has influenced delivery mechanisms of skills training; 63% of companies responded to have already adopted some form of mixed methods for training. The primary method currently adopted is video conferencing at 61%, with plans for online training tools, multimedia and virtual simulators (FoodBev SETA COVID-19 Survey Report, 2020). This indicates a potential increased demand for digital and ICT skills.

The survey results further demonstrated disruptions in supply chains; difficulty in import and export of materials and goods locally and internationally and lower domestic sales (FoodBev SETA COVID-19 Survey Report, 2020). These challenges were reinforced during the focus groups, which also identified shifts in demand of goods; increased demand for staple and non-

perishable goods (SSP FGI, 2020). Moreover, the analysis of the survey indicates that companies (large, medium and small) in the sector are considering a centrally coordinated supply chain to respond to the above-mentioned supply chain challenges. Food and beverages companies also need to gravitate towards e-commerce strategies in order to get the products into the hands of consumers.

According to Choudhury (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 hindered the growth of the food and beverages industry. While the immediate impacts of the global pandemic are already evident, the long-term impacts are harder to predict. A brief discussion of the immediate impact of COVID-19 on different sub sectors is provided below.

Immediate impact of COVID-19 on the different subsectors

Manufacture of dairy products

The consumption of dairy products in South Africa has decreased since the start of the COVID-19 pandemic. Stakeholders from the dairy industry reported that the closure of restaurants, hotels and guesthouses during levels four and five of the national lockdown has had a negative impact on the dairy industry as the lockdown resulted in sudden decline of demand in dairy products like cheese (SSP Interview, 2020).

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

According to Christianson (2020) the fishing industry in many countries is considered critical for food production and supply, however due to COVID- 19 the fishing industry is facing two main problems; disrupted supply chains and declining markets (FAO, 2020). The measures taken by different countries across the world (e.g. closed borders) have resulted in disruptions in transportation, trade, and labour (FAO, 2020). Interviews with stakeholders from the fish industry indicate that disruptions from these lead to delayed stock and lower supplies access, and decreased consumption of fish (SSP FGIs, 2020).

The meat industry is significantly affected, as consumers are now shifting to home cooked meals rather than eating out (Norje, 2020). In South Africa beef is largely used in restaurants and fast food services, of which there is a significant decline in demand due to lockdown restrictions and social distancing measures in restaurants (SSP FGIs, 2020).

According to the Agricultural Produce Agents Council and stakeholders, the outbreak of COVID-19 pandemic has increased demand for processed fruit and vegetables as more people are buying huge amounts of shelf-stable and processed food.

Manufacture of Beverages

South Africa's alcoholic beverage industry has been hard-hit by COVID-19 lockdown regulations. Companies producing alcohol have experienced a significant decline in sales due to the prohibition of sales locally under the Disaster Regulations governing the national lockdown in South Africa, however export of alcoholic beverages is allowed after an initial ban (SSP Interview, 2020; Larkin, 2020). Stakeholders from the wine industry reported that vineyards are still being affected by logistical challenges, adverse weather and the lack of wine tourism (SSP Interview, 2020).

Manufacture of Food Preparation Products

Globally, the COVID-19 virus has increased the demand for healthy snacks and baking goods (Hyslop, 2020). The reason for this demand is because people are eating more healthy snacks (dried fruit snacks, cereal and granola bars, meat snacks, nuts and seed snacks) since the pandemic and are baking more to pass by time at home (Hyslop, 2020).

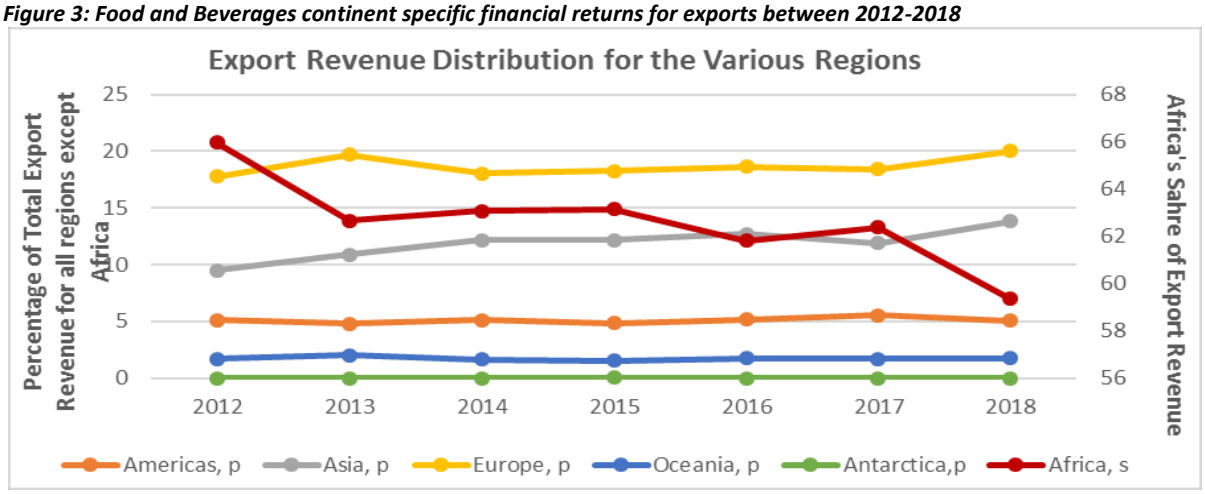
1.4.3 Exports and Imports

Recent research suggests that South Africa possesses a competitive advantage in a few food and beverages sub-sectors that, if fully exploited, would place South Africa among the top ten export producers in high-value agricultural products (Department of Agriculture, Forestry and Fisheries and Food South Africa, 2018). A closer look at data illustrates that between 2012 and 2019 South Africa has been experiencing an increase in trade in the food and beverages sector but has been losing global market share. The products from subsectors such as fruit and vegetable juices, high-quality wines and indigenous Rooibos and Honeybush tea, are highly sought after in the export markets (Department of Agriculture, Forestry and Fisheries and Food South Africa, 2018).

For the past seven years, 2012 to 2018, Africa has generated the largest revenue from export, ranging from 66% (highest in 2012) to 59% (lowest in 2018) of total global export revenue, refer to Figure 3. However, Africa's revenue from exports is in decline, an 11% decline in export revenue is observed in 2018 from 2012 levels. The export revenue of Asia increased by 31% in 2018 from 2012 levels, whilst the export revenue of Europe increased by 11% in 2018 from 2012 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 2012. 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. Institutions such as the Food and Agricultural Organisation (FAO) of the United Nations have found that there will be a continuous increase in population growth in Africa and Asia. According to FAO (2018), these two regions may very well be home to a total population of 9 billion of the projected 11 billion people on the planet by year 2100. 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.

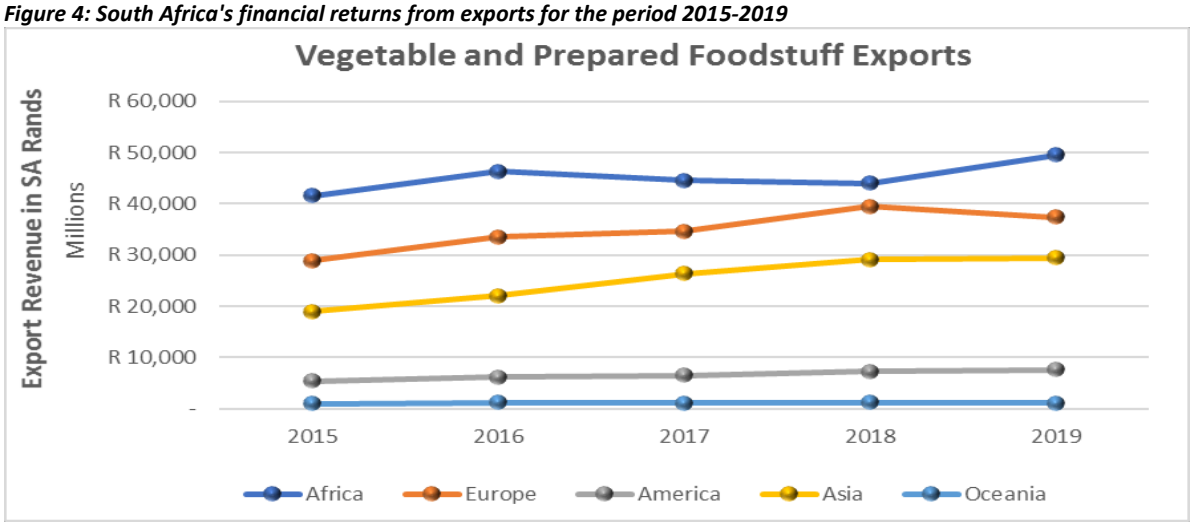
Figure 3: Food and Beverages continent specific financial returns for exports between 2012-2018



Source: Department of Agriculture, Forestry and Fisheries (2018)

SARS (2019) data indicates that the general trend is increasing in terms of vegetables and prepared food exports. Figure 4 below shows 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 4: South Africa's financial returns from exports for the period 2015-2019



Source: SARS (2019)

1.4.4 Other Economic Indicators

The reported average CPI as at March 2020 is 4.1% with food and non-alcoholic beverages identified as one of the main contributors (Statistics SA, 2020c). Statistics SA further reported the price of food and non-alcoholic beverages increased by 4.2% year on year and contributed 0.7% to the total annual CPI (Statistics SA, 2020c). The food inflation rate has been on a decline over the months despite the rise in Value Added Tax (VAT) in 2018 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 (Rall, 2019). 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 COVID-19 impact on the crude price is positive for consumers but the deterioration of the Rand could provide for increases in fuel prices. 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.

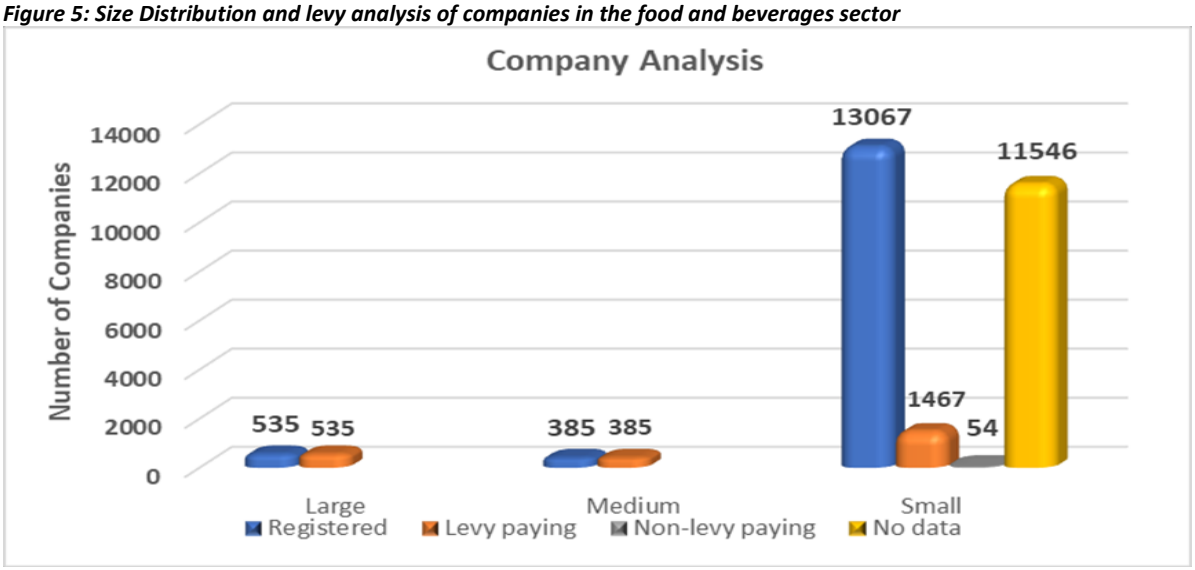
1.5 EMPLOYER PROFILE

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 (2020), the number of companies registered and classified under Food and Beverages Manufacturing Sector increased by 13% from 12 355 in 2019 to 13 987 in 2020. 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 Huge File, 2019). The small companies comprise 93% of the sector, followed by large companies at 3% and medium companies at 4%, as illustrated in Figure 5. All companies with an annual payroll of R500 000 and above are required to pay levies. According to the SARS database, 13 067 are small companies and 1 467 of these companies pay levies, 385 are medium and they all pay levies and all the large companies pay levies. The "No data" refers to the companies in the SARS database that have no information on whether they pay levies.

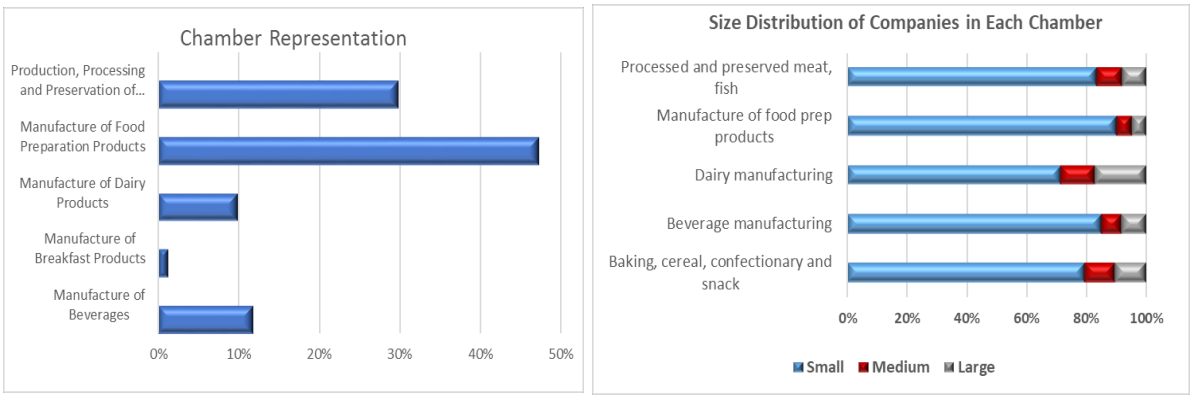
Figure 5: Size Distribution and levy analysis of companies in the food and beverages sector



Source: SARS Levy Paying Database, 2019 (2020)

There are significantly smaller companies registered with the FoodBev SETA, indicating that the focus of skills interventions should be on SMMEs. 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 will affect a lot 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 6: A Analysis of companies in each Chamber (WSP 2019/20): B Analysis by company size (SARS-2020)



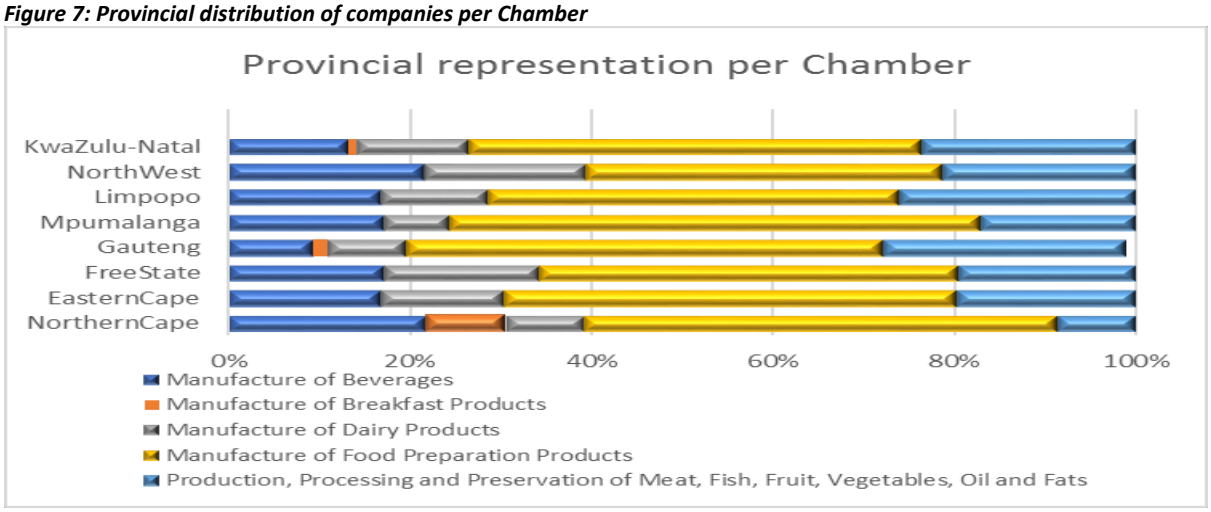
Source: FoodBev SETA WSP-ATR, 2019/20, SARS 2020. SARS data 2020 does not contain the new chamber configuration.

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 followed by the Production, Processing and Preservation of Meat, Fish, Fruit, Vegetables, Oil and Fats as illustrated in Figure 6. The Food Preparation Products Chamber has the largest proportion of small companies at 42%, followed by the Processed and Preserved Meat, Fish, Fruit, Vegetable, Oils and Fats Chamber at 28%. Within each of the Chambers it is clearly demonstrated that small companies comprise 80% of total company representation, with the exception being the Dairy Chamber. This re-enforces 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.

1.5.2 Geographical representation of employers[3]

The provincial distribution of employers is skewed towards the country's economic hubs, mainly in the Western Cape and Gauteng Provinces. Figure 7 illustrates the distribution of the various Chambers across the nine provinces. The Gauteng, Northern Cape and Kwa-Zulu Natal are the only three provinces, which have the presence of all five Chambers.

Figure 7: Provincial distribution of companies per Chamber



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

Source: FoodBev SETA WSP-ATR, 2019/20

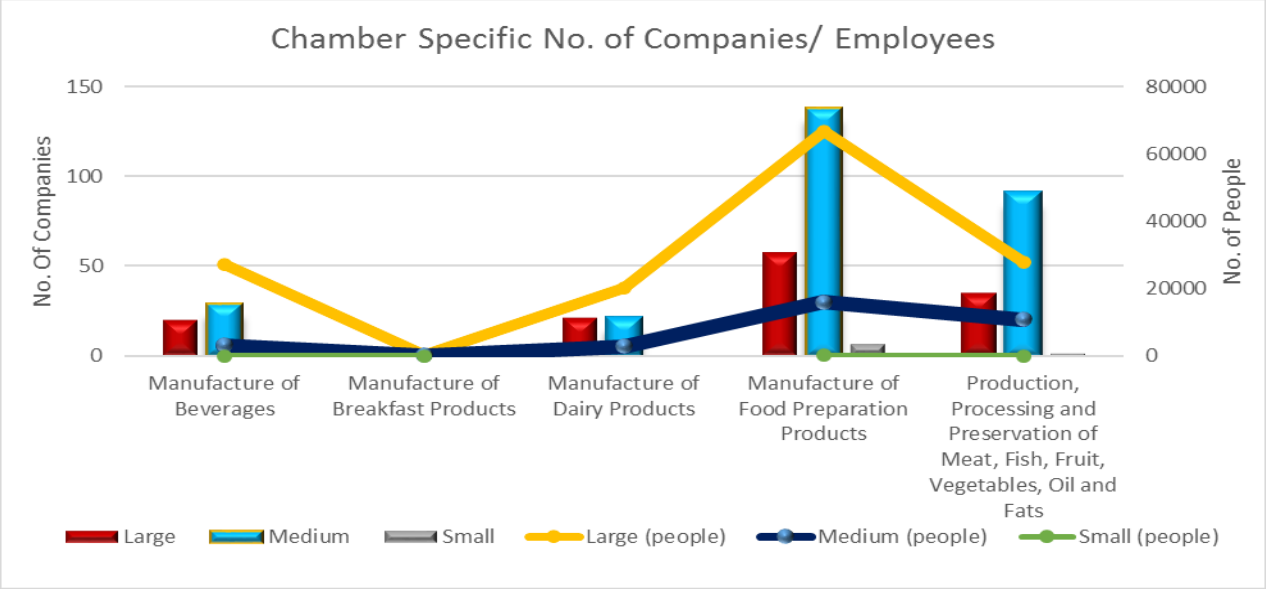
1.6 LABOUR MARKET PROFILE OF THE SECTOR

There has been a steady increase in the total number of employments in the sector over the past five years. The sector employment numbers increased from 248 072 in 2018 to 256 344 in 2019 (SARS 2019).

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 2019/20 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 most number of people, and has the largest number of companies.

Figure 8: Employment breakdown by sub-sector



Source: FoodBev SETA WSP-ATR, 2019/20

1.6.2 Employment by gender and occupational Groups

The gender breakdown of employment in the sector based on a comparative analysis of 2018/19 and 2019/20 WSP submissions illustrates that the sector remains male dominated at 60% male (60.6% 2019 and 60.4% 2020). Males dominate seven of the eight employment categories with the exception of clerical support workers. This is a reversal to the 2019 data where females also exceeded the 50% mark in the professional category. The two categories experiencing greater female (compared to male) growth in numbers are Managers (by 7.1%) and Technicians and Associate professionals (by 3%). This may be the category to support in terms of "African female" growth in numbers. The classification from technical to elementary is dominated by HDI's. It is therefore critical that learning interventions should be channelled mostly towards upward mobility of HDI's.

1.6.3 Employment by Age

The breakdown of employees by age illustrates that most employees in the sector, 89 579 (49%) fall within the 35-55 age category, while there were 83 188 (44%) employees that were younger than 35 years old. In addition, employees older than 55 years old comprised

of only 127 27 (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

The largest racial group employed in the Food and Beverages Manufacturing Sector in 2019/20 were the Africans, making up 69%, followed by Coloured at 18%, Whites at 10% and Indian/Asian at 3%. According to Figure 9, Africans are predominant in all categories except Managerial, where whites are more prevalent at 43%. 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 35%, whilst white females represent 38%.

The number of African managers has increased in comparison to the findings from the 2018/19 WSP, 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 (WSP-ATR 2018/19).

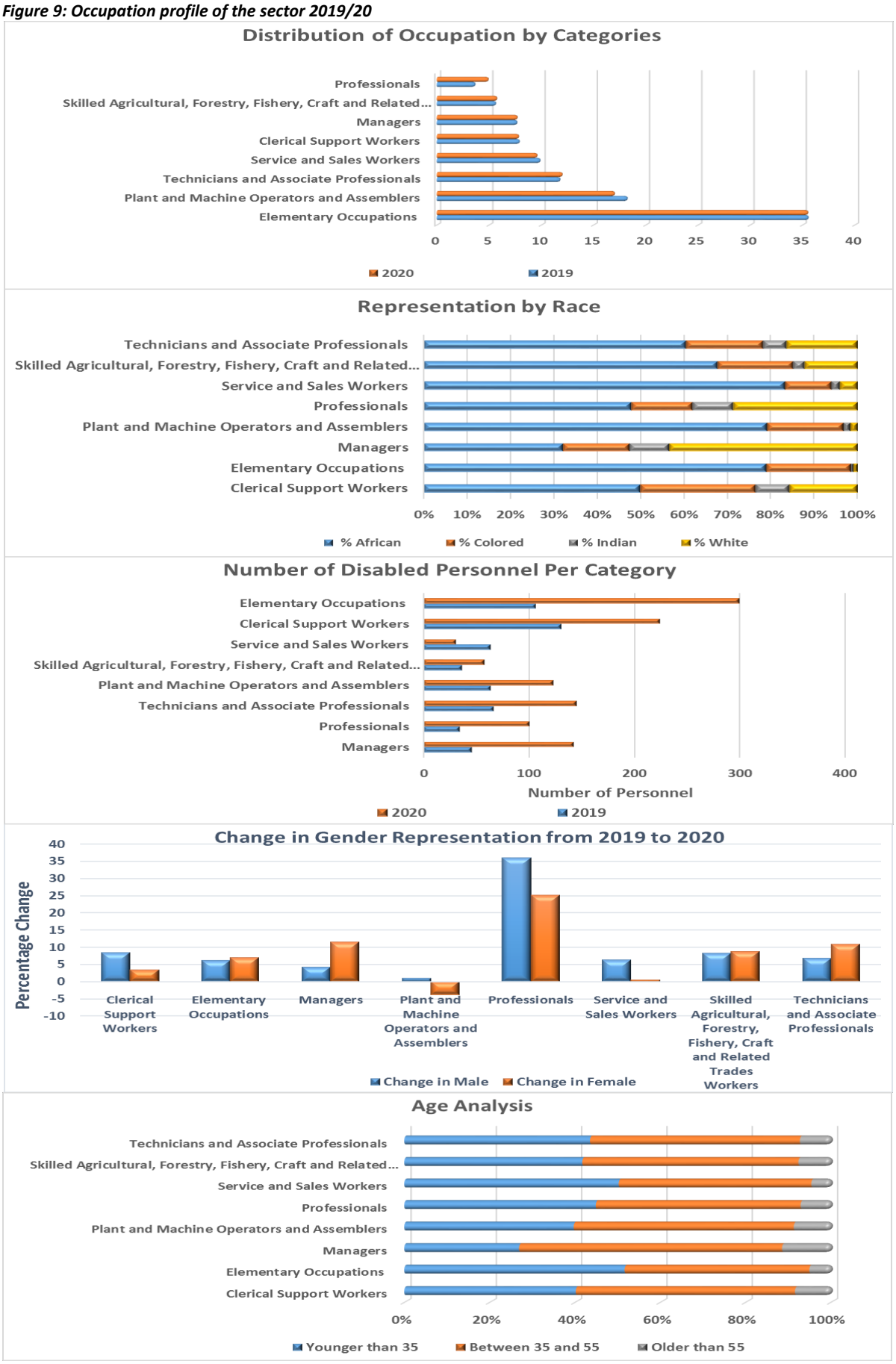
1.6.5 Employment by Disability

Employees with disabilities only represent 0.6% of total employment in the sector, indicating a 0.3% increase in employment of people disabilities with as compared to 2018/19. The elementary occupation has the highest proportion of workers with disabilities. 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 37% and Western Cape represents 28% of the employees followed by KZN at 15%. The provincial distribution aligns to previous years. The provinces with the least number of employees are Northern Cape at 1%, Mpumalanga at 2.5% and Free State and North West both at around 3% each (WSP, 2019/20).

Figure 9: Occupation profile of the sector 2019/20



Source: FoodBev SETA WSP-ATR, 2019/20

1.7 CONCLUSION

The FoodBev SETA has aligned its constituencies to the latest approved SIC Codes table. This process was followed through the consultation and update of the SETA constitution. 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 latter thus affects the economic performance of the sector which still needs further research specific to South Africa.

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 79% (both male and female) with whites at 1%. Africans (both male and female) encompassed 32% of employees in the managerial occupational category compared to 43% (both male and female) of Whites. However, in analysis of the females only, African females represent 35% of managerial position whilst White female managers represent 38%. Non-white employees represent fewer employees 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 63% of managerial positions and females only 37%.

The disability figure of 0.6% 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 surveys with key stakeholders from the food and beverages sub-sectors and a comprehensive review of existing studies and reports.

2.2 FACTORS AFFECTING SKILLS DEMAND AND SUPPLY

The novel COVID-19 pandemic has impacted the Food and Beverages Manufacturing sector across the world. According to UNSCN (2020) food environments around the world are changing to a point that it is influencing the consumers' dietary practices. The outbreak of this virus has 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 Systems Standing Committee on Nutrition, 2020 & Trade and Industry Policy Strategies, 2020). The landscape of the supply and demand of skills in the Food and Beverages Manufacturing Sector is influenced by various long-term drivers which directly impact skills planning initiatives. Five change drivers are identified namely:

- **Technological Advancements** (World Economic Forum, 2018): Technology is radically transforming industries as its potential benefit is being rapidly realised, with the food and beverages industry being no exception. With COVID-19 requiring social distancing, technological interventions are expected to increase.
- **Climate Change** (Salmon, 2017): Climate change is a global concern, with the food and beverages industry being responsible for a considerable proportion of greenhouse gas emissions. Consumers are becoming environmentally conscious; seeking products manufactured in environmentally responsible manner.
- **Food Safety** (World Health Organization, 2015; Hoffmann et al, 2019; Boatema et al, 2019): Food safety is a global concern, but more prominent in developing countries. The current pandemic has prioritised food safety, with relevant skills a priority. The cost of food safety is significant.
- **Health and Nutrition** (World Economic Forum, 2018): Consumers are becoming more conscious of the nutritious content of the food they consume. As a result, dietary requirements are moving towards healthier options, thus requiring producers to accordingly cater for these changing demands. COVID-19 would also influence food choices both from a health perspective and price sensitivity.
- **Globalisation (Competitiveness and Urbanisation)** (World Economic Forum, 2018; Salmon, 2017): As the urban population grows, food consumption and dietary preferences change, which the sector needs to cater for. Shift in competitive landscape due to changing consumer desires. The impact of COVID-19 on global supply chains is to be determined.

Technological Advancements

Technological advancement is having a profound effect on the Food and Beverages Manufacturing sector and has been reinforced by stakeholders during interviews. The COVID-

19 pandemic is emerging as a powerful driver for digital transformation in the FoodBev industry (FoodBev SETA COVID-19 Survey Report, 2020; SSP FGIs, 2020; SSP Survey 2020). New technology may create job losses in the short term, but enables creation of a greater number of jobs in the long term; the introduction of the Personal Computer (PC) has created 15.8 million jobs in the USA alone since the 1980, with 90% being in industries that use the PC such as financial analysts and customer services (Bughin et al., 2017). Increased productivity via technology enablement has resulted in reduction of weekly working hours resulting in increased time for leisure activities. This creates new jobs and skills requirement in the leisure sector (Bughin et al., 2017). New technologies promote innovation in the food industry (Siegrist, 2008). While the food and beverages industry has been slow in capitalising on the benefits that can be realised from utilisation of technology (World Economic Forum, 2018), COVID-19 has accelerated digital transformation which may have a long-lasting impact post the pandemic (WEF, 2020). This is affirmed with the COVID-19 survey, which identified the pandemic as a powerful driver for digital transformation in the food and beverages industry (FoodBev SETA COVID-19 Survey Report, 2020). The COVID-19 survey and interviews demonstrated that the restrictions imposed by the COVID-19 pandemic forced many companies that were previously dependent on face-to-face contact with learners to rapidly shift to mixed methods approach to skills training (FoodBev SETA COVID-19 Report, 2020).

Various technologies affect and influence the food and beverages industry resulting in optimised sales and marketing, logistics, maintenance, and quality. RFID used with mobile phones, could enable easy access to information about the authenticity, freshness, ripeness, shelf life and nutritional content of food (World Economic Forum, 2018). Advanced analytics and Nutrigenetics can be used to enable consumers to get nutrition-related recommendations personalised to individual digestive ability, diet, health needs and taste preferences (World Economic Forum, 2018).

Business Implications: As the industry adjusts to the new and uncertain environment caused by the COVID-19 pandemic the key to overcoming current and future challenges while leveraging the opportunities lies in rapid adoption of food technologies and digitisation (WEF, 2020). COVID-19 is transforming skill delivery mechanisms, with digital and online training at the forefront. A workforce that has advanced technical knowledge, an understanding of digital supply chains, relationship management and digital skills will be crucial. Technological advancement also calls for increased investment in post-graduate research and learning to ensure that the industry remains at the forefront of technology.

Climate Change

Climate change generally refers to all changes in the patterns of weather and has a severe impact on global food production and food security (FAO, 2020). Changes in global food systems and the increased globalization of the food supply chain means that populations worldwide are at risk of exposure to various food safety hazards (FAO, 2020 & Masipa, 2017). Leivas et al., (2020) reported the Food and Beverages industry is accountable for approximately 2% of global CO_2 emissions. The CO_2 emissions are mainly dependent on energy usage and water consumption. Drought also affects the sector as it directly reduces crop yield and increases incidences of fires that destroy crops and agricultural land, in addition to reducing water supply (Carter and Gulati, 2014). 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, 2020). The UN Environment (2020) further argues that climate change will exacerbate the vulnerabilities of food systems and human health.

Business Implications: Addressing COVID-19 and protecting the food industry against future global threats requires sound management of hazardous medical and chemical waste (UN Environment, 2020). Other business implications include futuristic predictions pertaining to climate change that are high-level and uncertain: the effects can be reduced by investment in improving the available information and knowledge to reduce the degree of uncertainty; spreading of the risks; improving the science behind the food production value chain; improving decision-making and enabling and ensuring sustainability in adverse circumstances (FAO, 2020). This 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

Today's global challenges are transforming the way people produce and consume food. The most pressing challenge revolves around food safety (FAO, 2020). 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, 2020 & World Health Organization, 2018). The increased globalization of the world's food supply means populations across the world are exposed to food hazards (FAO, 2019).

In South Africa particularly, there are three major food safety concerns; foodborne diseases, food fraud and a lack of regulatory enforcement (Boatemaa et al, 2019). These factors all contribute to the creation of a high-risk environment to food safety (World Health Organization, 2018).

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). The food handling safety requirements based on COVID-19 is intrusive but has to be considered.

Business Implications: Major disease outbreaks such as COVID-19 are sharply impacting the food and beverages industry, making it clear that food companies must adapt to operate in a volatile, uncertain and complex environment (Tarver, 2020). Stakeholders recognized the need for investments in food safety, food quality and hygiene, and anticipate it being a long-term investment (SSP FGIs, 2020). Businesses have already begun to introduce basic hygiene and preventative measures (social distancing, checking temperatures and regular disinfecting of hands), and are considering making remote work permanent (FoodBev SETA COVID-19 Survey Report, 2020; SSP FGIs, 2020).

Health and Nutrition

According to stakeholders there is a continued shift in consumer consumption patterns towards natural, organic and healthy eating driven primarily by the need to preserve and

enhance their health and appearance (SSP FGIs, 2020). Plant-based food is also a key trend driving the food and beverages industry (Food Stuff South Africa, 2016). Post COVID-19, the world will see dramatic shifts in dietary patterns towards more healthy, protective foods such as fruits, vegetables, seeds, nuts, fish and whole grains (Steiner, 2020).

Reducing the levels of fat, salt and sugar in foods and beverages is one of the one of the main nutrition targets in food and beverages (SSP FGIs, 2020). According to stakeholders, companies in the sector are reformulating recipes to reduce excessive consumption of sugar and salt to reduce non-communicable diseases (NCDs) such as hypertension, stroke, obesity and poor nutrition (SSP FGIs, 2020). Personalised nutrition presents a growth opportunity for the food and beverages industry because consumers are increasingly favouring individually tailored diets (Food Stuff South Africa, 2016). Many consumers are following the trend of personalised services like wearable gadgets that provide guidelines based on their weight, height, sleeping patterns, heart rate and activity (Food Stuff South Africa, 2016).

Business/skills Implications: The nutritional content of food consumed by consumers is becoming increasingly important with caution being placed on the sugar content and digestive health benefits. 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. 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 and Urbanisation

According to FAO (2016) 68% of the global population is predicted to live in urban areas by 2050. Therefore, the continuing trend towards globalisation will introduce growing pressure on the global food system. Dietary changes can increase pressures on agricultural systems. Consumers are increasingly challenging current standards and are requiring food producers to be proactive about sustainability. 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 Programme (2020) as the coronavirus crisis unfolds, an estimated 265 million people could face acute food insecurity by the end of 2020.

Business/skills implications: COVID-19 pandemic has paved way for companies to build more resilient food systems and come up with innovative methods such as e-commerce to keep sales growing (Fan, 2020). Customer management, key accounts management, international trade, advanced marketing skills and digital supply chain management were identified by participants as key areas that could give businesses in the sector an advantage over their global competitors (SSP FGIs, 2020). The sector, therefore, needs to adjust the training policies and priorities to align with the trends and be equipped with the correct skills mix to achieve and maintain global competitiveness. Impacts of COVID-19 on supply chains include localised procurement.

Summative Analysis: Change drivers and impact on skills planning

The food and beverages industry in South Africa contributes immensely to economic growth (Boatemaa et al, 2019). The change drivers identified together with the coronavirus (COVID-19) outbreak give rise to a variety of factors that impact the supply and demand of skills in the sector for the foreseeable future. The COVID-19 impact on manufacturing and distribution

costs is also expected to be significant and the impact on distribution and global supply chains must be considered.

There are generic occupations that are expected to increase in demand in the food and beverages industry and these are: Data Analysts and Scientists, Sales and Marketing Professionals, Artificial Intelligence and Machine Learning Specialists, Training and Development Specialists, General and Operations Management Specialists, E-commerce and Social Media Specialists, Organisational Development Specialists, New Technology Specialists, Information Technology Services, User Experience and Human-Machine Interface Designers (World Economic Forum, 2018). As COVID-19 continues to affect the future of food, the industry is expected to experience an increased demand for skills such as Food Technologists and Food Safety and Hygiene Specialists to ensure improved food safety operations and processes. These occupations as well as the current roles, will require the workforce to have the following associated generic skills: analytical thinking and innovation, creativity, originality and initiative, active learning and learning strategies, technology design and programming, complex problem-solving, critical thinking and analysis, leadership and social influence, emotional intelligence, resilience, flexibility (World Economic Forum, 2018). However, based on the context of South Africa the issues pertaining to food safety, food hygiene, quality control, monitoring and reporting are critical. 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 (2018), the following combinations of 4IR technologies can enable 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, 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 (World Economic Forum, 2018). 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, 2018).

2.4 ALIGNMENT WITH 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 4: 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. FoodBev 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.
Human Resources Development Strategy for South Africa 2010-2030 (HRDS-SA)	To accelerate training in the priority areas including artisanship. HRDS further leverages public and private sector programmes to create employment opportunities and work experience for new entrants into the labour market. It also helps in improving coverage and 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 Food and Beverages 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 SMMEs 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 (4) intervention pillars to mitigate barriers to entry but also 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 National Growth Path (NGP) all lean towards the training and development of artisans as being a critical skill and the need to support TVET colleges and collaborations. 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.

The analysis of the skills demand as per the drivers referred to in this document indicates a somewhat different landscape where a much wider scope of in-demand occupations and skills is anticipated. The drivers refer to and indicate an anticipated growth in the demand for analytical thinking skills, programming skills, specialized occupations and skills in the area of food safety and transparency, technology centered occupations and skills and increased focus on the quality as opposed to the quantity in output of artisan training. A distinct difference can be seen between the anticipated in-demand skills put forward by national policy and broader industry (research). It can, to a certain extent, be understood why policy would only generally consider artisanal skill as being critical where industry places other anticipated in-demand skills at the forefront.

2.6 CONCLUSION

This chapter highlighted the key factors impacting the Food and Beverages Manufacturing Sector and major national plans in the sector and the skills responsibilities they trigger within the SETA environment. The general anticipated impact of COVID-19 is expected to be significant and would affect all change drivers. The health and nutrition, food safety and technological advancement drivers are expected to experience the most significant changes. Negative impacts to growth in the sector is also anticipated.

One of the main drivers of change is health and nutrition that is fundamental to the growth of organic food. Global competitiveness and Urbanisation is also an important change driver and the Food and Beverages sector must 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 impact of technological advancements on the Food and Beverages Manufacturing Sector is another salient change driver. The transformative role of the 4IR should be embraced for industry optimisation as it presents several potential benefits for the sector. The key skills issues that can be inferred from the change drivers and the national plans and priorities are:

- Research and development for innovation and new product development regarding the challenges of climate changes, COVID-19, drought, and healthy eating.
- The need for Food and Beverages Scientists, Food Technologists with food labeling and regulation skills, Microbiologists, Chemists and Materials Scientists for testing, most especially due to COVID-19.
- Provision of training to small agro-processing entities to alleviate the high cost of compliance to norms and standards that act as a barrier to entry.
- Technological and alternate logistical skills due to COVID-19.

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 2019/20 WSP's/ATR's and qualitative instruments. Focus groups, interviews and a survey were used to gather the data. The overall population for the focus groups and survey was the entire 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 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 10 occupations that are 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 TRENDS IN FOOD AND BEVERAGES

A qualitative analysis of global literature is conducted. 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 McKinsey (2017), WEF (2018), WEF (2019) and Choi (2019). 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 (WEF, 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 WEF (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 (WEF, 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 Y, 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 SME impact of COVID-19 is forecast to be significant (Labour Market Series 2020). The FoodBev sector response to support SME's in surviving the COVID-19 must be planned. An

initiation point of validated data is the WEF (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, AI and machine learning. Extracting from WEF (2018), for Sub Saharan Africa, a similar trend on software and marketing is forecast

Table 5: Extracted from WEF (2018)

Consumer Industry (Trends)			Sub Saharan Africa	
Current roles increasing	**Current roles decreasing**	**Emerging occupational (15% in 2018 with a growth to 28% in 2022)**	**Current roles increasing**	**Current roles decreasing**
Marketing Specialist	Salesperson	Data Analysts and Scientists	Software Engineer	Accountant
Software Engineer	Administrative Assistant	Sales and Marketing Professionals	Marketing Specialist	Administrative Assistant
Marketing Manager	Customer Service Representative	AI and Machine Learning Specialists	Marketing Manager	Mechanical Technician
Marketing Representative	Manager of Retail	Training and Development Specialists	Writer	Journalist
Human Resources Specialist	Merchandiser	General and Operations Managers	Financial Advisor	Electrical Technician
Food and Beverage Server	Customer Service Specialist	Ecommerce and Social Media Specialists	Data Analyst	Technical Support Technician
Sales Consultant	Sales Manager	Organisational Development Specialists	Human Resources Specialist	Supply Chain Manager
Manager of Marketing	Artist	New Technology Specialists	Salesperson	Finance Officer
Account Manager	Accountant	Information Technology Services	Business Development Manager	Electrical Engineer
Driver	Manager of Customer Service	User Experience and Human-Machine Interaction Designers	Lawyer	Civil Engineering Technician

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, 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 WEF (2019) report, where SA ranks 39 of 141. Israel is at the forefront of entrepreneurship development (Heilbrunn, 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, 2018; Card, 2015). Skills development and SMME growth are linked. The training of learners with entrepreneurship skills has the most significant impact on developing entrepreneurs (Kluve, 2017). New business models and value chain development are key to unlocking entrepreneurship (Betcherman, 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, 2016). The value of tech hubs in Africa is a proven and growing mechanism to deliver on skills and entrepreneurship. Avle

(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 WSP/ATR and PIVOTAL Plans is conducted. This is to compare actual investment, relative to HTFV. Firstly, the ATR analysis reveals a total of 102 860 employees were trained in 2019/20. 74% of the employees were trained on entry level (NQF Level 1-3), 24% at the intermediate level (NQF Level 4-6) and 2% at the advanced level (NQF Level 7-8). The total spend was R568 Million, of which the SETA funding was 34%. The table below provide a classification of the data.

Table 6: WSP analysis of training

Program	No. of Trainees	Occupation	No. Trained
Short Courses	83372	2017-832904 - Food and Beverage Factory Worker	12484
Skills Programmes	7980	2017-332201 - Commercial Sales Representative	10476
AET/End-User Computing	3121	2017-716104 - Dairy Products Machine Operator	4932
Workplace Experience Placements	2935	2017-312201 - Production / Operations Supervisor (Manufacturing)	4070
Learnerships	2815	2017-716105 - Bakery and Confectionary Products Machine Operator	3408
Bursaries	621	2017-411101 - General Clerk	2299
Apprenticeships	369	2017-122101 - Sales and Marketing Manager	2218
Professional Placements	202	2017-718302 - Packing Machine Operator	2206
Internships	176	2017-734402 - Forklift Driver	2145
		2017-522301 - Sales Assistant (General)	1941

The analysis provides for the most significant number of courses being short learning programs followed by skills programs and AET programs. An analysis of the top 10 occupations trained has basic alignment with the SSP identification of HTFV.

3.2.4 Skills gaps in the sector (Focus Group interviews and Surveys)

Skills gaps refer to skills deficiencies in employees or lack of specific competencies by employees to undertake job tasks successfully to required industry standards. In the survey a skills matrix was used to identify the employee gaps. The skills matrix is structured to identify the gaps at the three occupational levels of a company. 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 7 defines the three levels and the skills matric required per level.

Table 7: Skills Gaps in the Sector (WSP: data instrument)

Major OFO Group	Occupations	Skill Gaps
Lower Level		
Elementary Occupations	Factory Workers	Literacy and Numeracy
	Meat Packer	Hygiene Knowledge and food safety
		Work readiness
	Mechanic Trade Assistant	Leadership skills
		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 7 have been identified in previous WSP/ATR. At the elementary level the skills gap 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 2019/20. There are 768 (WSP 2019/20) occupations with a total of 1 444 actual vacancies.

The research team commences with an analysis of the HTFV per Chamber, Table 8. 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 8: 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 (2019/20)

The data is analysed on the basis of the most significant 10 HTFV per chamber. The table below 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.

Table 9: Cumulative representation of top 10 HTFV

HTFV	Production, Processing and Preservation of Meat, Fish, Fruit, Vegetables, Oil and Fats	Manufacture of Food Preparation Products	Manufacture of Dairy Products	Manufacture of Beverages	Total	% of HTFV	% of Category	Sum of Lack of relevant qualifications	Sum of Lack of relevant experience	Sum of Unsuitable job location	Sum of Equity considerations	Sum of Unsuitable working hours	Sum of Poor remuneration	Sum of Other
2019-226302 - Safety, Health, Environment and Quality (SHE&Q) Practitioner	10				10	0.694%	0.045%	9	11	4	1	1	1	2
2019-132106 - Manufacturing Quality Manager	10			10	20	1.388%	0.221%	9	9	3	3	0	0	1
2019-841101 - Fast Food Cook		11	0		22	1.527%	0.033%	0	2	0	0	1	1	1
2019-132107 - Quality Manager	11	11		11	33	2.290%	0.364%	2	7	3	0	0	0	1
2019-313906 - Fresh Produce Packing Controller				35	35	2.429%	0.053%	3	3	1	0	0	0	0
2019-132402 - Logistics Manager	13	11		13	37	2.568%	0.261%	4	8	4	1	1	0	1
2019-681103 - Butcher			0	23	38	2.637%	0.058%	9	9	1	1	1	0	0
2019-652302 - Fitter and Turner			20	22	42	2.915%	0.189%	7	3	2	2	0	0	0
2019-671101 - Electrician			21	21	42	2.915%	0.189%	8	6	4	0	0	2	0
2019-821101 - Crop Production Farm Worker / Assistant		22	0		44	3.053%	0.067%	1	1	0	0	0	0	1
2019-343401 - Chef			23	28	51	3.539%	0.563%	5	8	1	2	1	2	2
2019-122101 - Sales and Marketing Manager	20	14		20	54	3.747%	0.305%	3	8	2	2	0	0	1
2019-132104 - Engineering Manager	23	15		23	61	4.233%	0.673%	8	13	8	3	1	1	1
2019-681102 - Red Meat De-boner			34	34	68	4.719%	0.103%	6	8	0	2	1	0	0
2019-121201 - Human Resource Manager	19	17	0	19	72	4.997%	0.795%	7	10	5	2	2	2	0
2019-122102 - Sales Manager	26	26		26	78	5.413%	0.440%	4	9	0	1	0	1	0
2019-121101 - Finance Manager	23	16	0	23	83	5.760%	0.916%	7	14	3	5	0	3	0
2019-312201 - Production / Operations Supervisor (Manufacturing)				83	83	5.760%	0.264%	19	29	4	3	3	4	2
2019-132102 - Manufacturing Operations Manager	36	28		36	100	6.940%	0.318%	13	14	10	5	2	1	0
2019-411101 - General Clerk			52	52	104	7.217%	0.720%	3	3	0	0	0	0	0
2019-832904 - Food and Beverage Factory Worker		62	0		124	8.605%	0.188%	9	16	2	2	2	0	4
2019-671202 - Millwright			62	69	131	9.091%	0.590%	18	15	7	2	0	3	3

The top 10 list is highlighted in yellow in the % of Category column. The food and beverage factory worker is on a proportionality basis removed from the top 10 list. Chef is not in FoodBev SETA so Logistics Manager is added to the top 10.

The reasons for HTFV, as extracted from the 2019/20 WSP's, reflect lack of relevant experience as the key reason (38%) followed by lack of relevant qualifications (29%) with unsuitable job location third at 10%. Cumulative impact of lack of skills and experience is over 67% of the reason for HTFV. Table 9 also provides the reasons per HTFV. The FoodBev SETA plans to have further engagements with the sector that will assist in dealing with the reasons that have been identified as the highest hinderances to addressing the HTFV. The purpose of the latter is to identify targeted interventions that will assist the sector with the identified reasons.

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 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 (Agrawal et al, 2020; WEF, 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). A majority of respondents who were interviewed indicated that many employees will continue to work remotely, and employees will have to learn new technologies and develop skills to use emerging technological tools in their work effectively (SSP FGIs, 2020). The skills identified by stakeholders were effective communication, leadership, technological, cognitive, technical, numeracy and literacy (SSP FGIs, 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 (Agrawal et al, 2020; Akyazi et al, 2020; Bughin et al, 2018). 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.

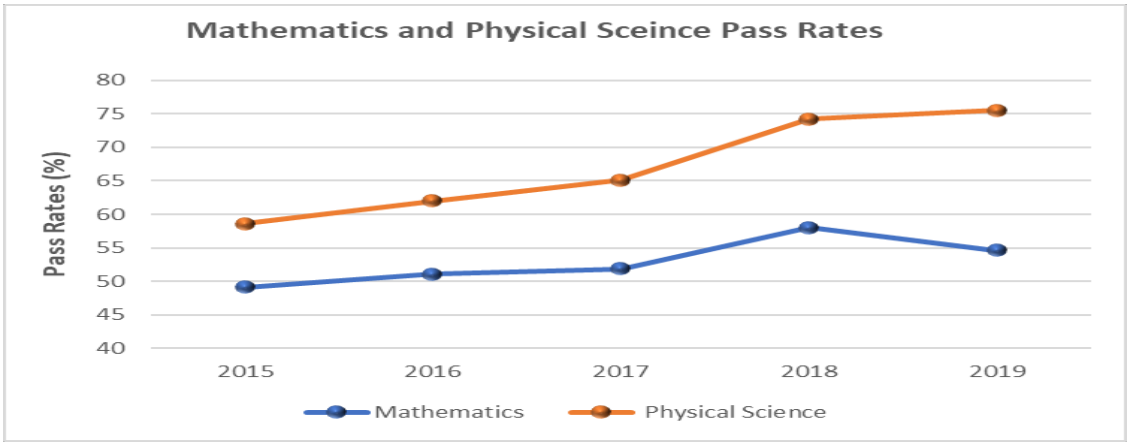
3.3 EXTENT AND NATURE OF SUPPLY

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 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 2015 to 2019 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 (Department of Trade and Industry, 2019)

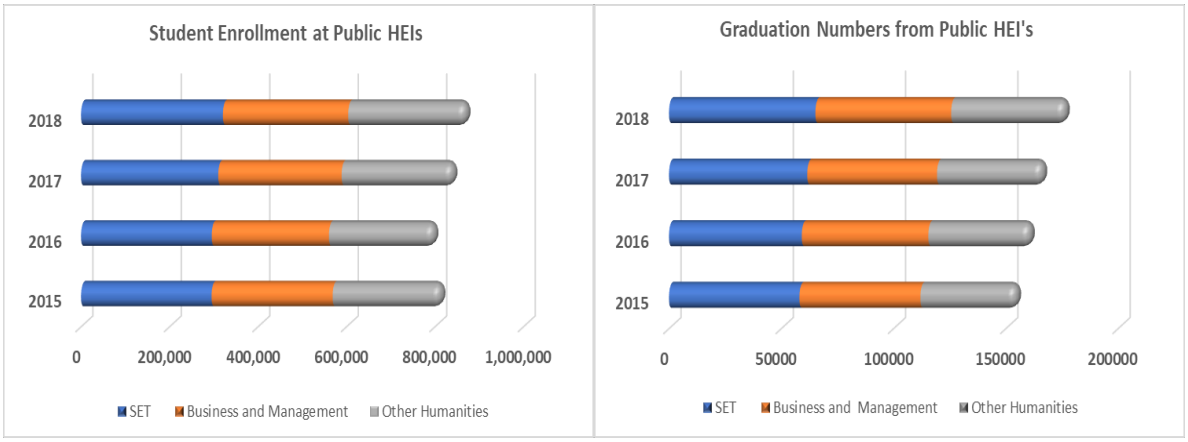
Figure 10: Mathematics and physics pass rates from 2015 to 2019



Data Source: Department of Basic Education: Report on the 2019 National Senior Certificate Examination

Figure 10 illustrates the pass rate for mathematics and physical science from 2015 to 2019. A steady increase in the pass rate of Physical Science is observed from 2015 to 2019, with the 2019 passing rate increasing by 1.3% in comparison to 2018. In Mathematics a steady increase in the pass rate is observed from 2015 to 2018, but there is a decline of 3.4% in 2019 as compared to 2018.

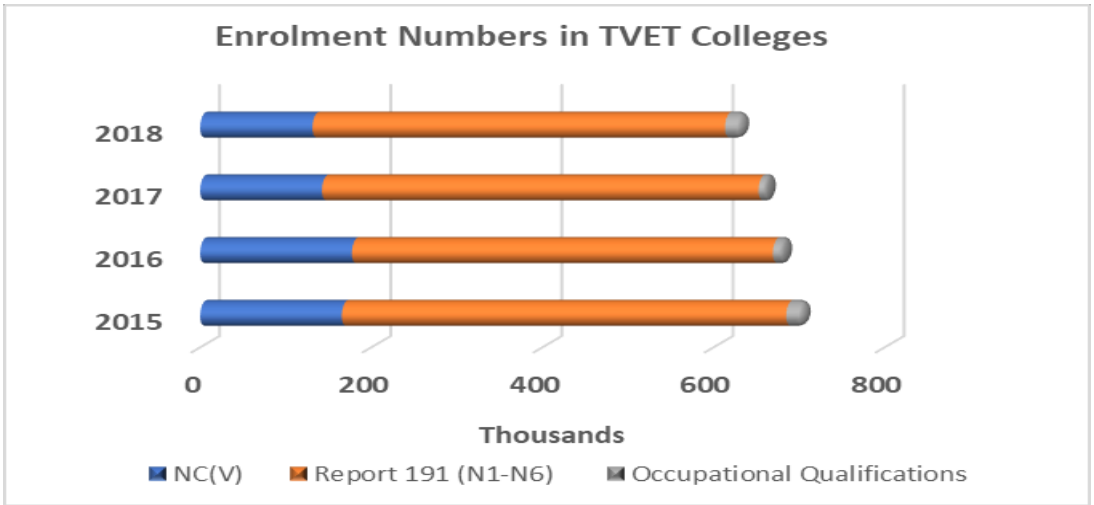
Figure 11: Number of Enrolled and Graduates at Public HEIs



Source: DHET: Statistics on post-school education and training in South Africa:2018

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 provides essential skills to the Food and Beverage Sector. In the SET programmes there is a year on year increase in enrolment numbers, whilst Business Management and Other Humanities typically demonstrated a year on year increase except for 2016, where a 3% decrease each in enrolment number were observed in comparison to 2015. The year 2016 seems to be an exception as the increase in enrolment numbers in SET programmes is significantly lower than the preceding and proceeding years. The graduation numbers across the SET, Business and Management and Other Humanities programmes increases steadily year on year.

Figure 12: Number of enrolments at TVETs in various programmes from 2015-2018



Source: DHET: Statistics on post-school education and training in South Africa:2018

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, 2016) system that produces candidates for apprenticeship. Candidates for apprenticeships preferably must have completed NCV (1-3) or N1 to N4. Notwithstanding the latter, DHET has reported that they are phasing out some of the NATED programmes as they are not responsive, and the curriculum is outdated (SAQA Bulletin, 2016).

The DTI reports that most practising artisans are unqualified as 46.6% (Department of Trade and Industry, 2017) have less than grade 12 and only 32.7% had grade 12 in 2016. 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 10 (FoodBev SETA, 2019) below. The table below 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. As indicated in the table, learnerships are the most registered SETA funded programme, followed by bursaries and apprenticeships.

Table 10: Most Implemented SETA Funded Training Interventions over 2017/18, 2018/19 & 2019/20

	2017/18	2018/19	2019/20
Bursaries			
Registered	230	320	248
Completed & Achieved	195	219	139
Artisans			
Registered	204	229	139
Completed & Achieved	84	90	55
Learnerships			
Registered	4 021	4 167	3 088
Completed & Achieved	1 622	1 660	2 938

Source: FoodBev SETA Annual Report (2017 & 2018)
***Numbers from MIS DATA**

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, sales 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 (FoodBev, 2019). 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, WSP's, DHET, 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 2020/22. 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 2019/20 WSP/ATR and PIVOTAL Plan submissions, literature review, survey as well as virtual interviews and focus groups. This list was 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 9, and divide the figure by 100.

Table 11:Sectoral Priority List (Post Stakeholder Engagement)

Occupation	No. of Vacancies	%
Engineering Manager	596	7
Production / Operations Supervisor (Manufacturing)	1 287	14
Quality Manager	312	3
Millwright	1 989	22
Human Resource Manager	710	8
Logistics Manager	369	4
Manufacturing Operations Manager	994	11
Sales Manager	766	8
Finance Manager	852	9
General Clerk	1 276	14
Total	9 151	100

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 meeting before final submission to the Accounting Authority for approval. The focus group participants comprised of mostly employers and industry experts.

The SSP Annexure B, presents the Sector Priority List with the corresponding NQF levels and training interventions. 50% 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 support by the SETA are 10% of specific programme targets, according to the APP. 50% 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, HR and Sales environments. Training interventions pitched from NQF levels 4–5. 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.

The demand for artisanal occupations within the sector seems to have has decreased but the analysis of the training budget shows investment in technicians and associate professional and Skilled agricultural, forestry, fishery and craft related trade workers was the second highest at 16%. 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.

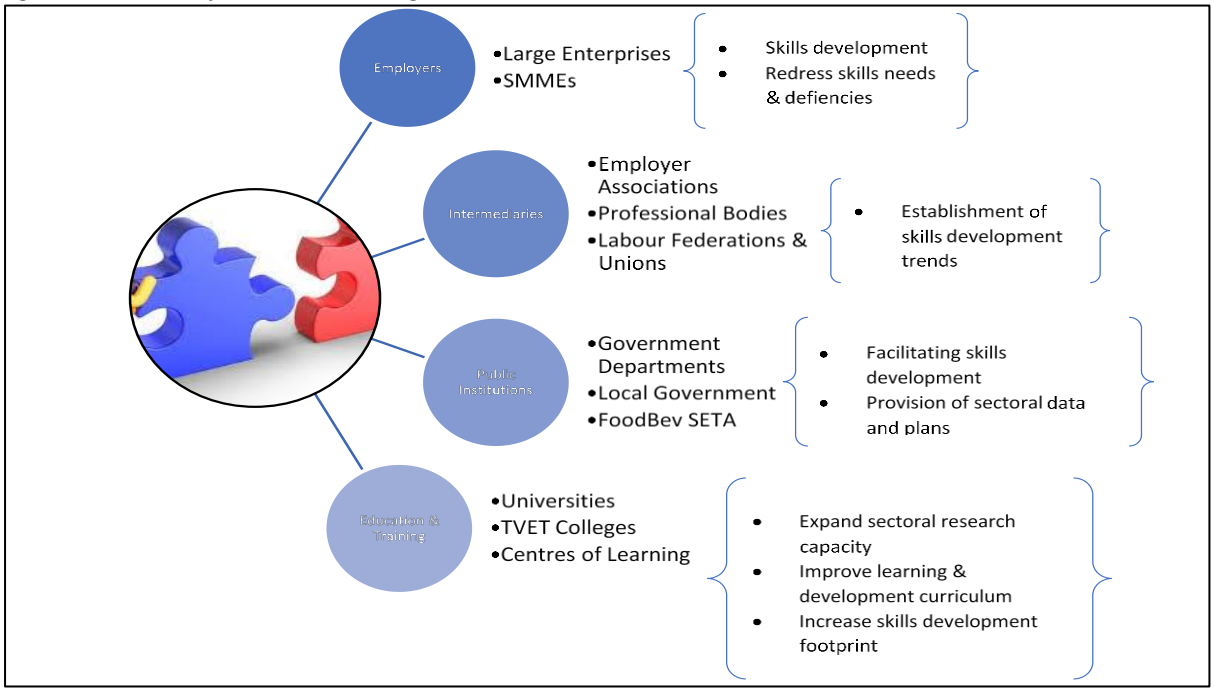
CHAPTER FOUR: SECTOR PARTNERSHIPS

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 13: 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: Value of Existing Partnerships

Name of institution/ partner organization	Nature of partnership (start & end dates)	Objectives of partnership	Outcome and Value of partnership
TVET Colleges (Maluti, Tshwane South, Ekurhuleni West etc.	Between January 2016 - 2020- March 2021	To increase the participation of unemployed youth, and capacitate and support TVET Colleges	Expansion of the SETAs footprint in TVET colleges as part of bringing services closer to the public
Various Universities (Venda, Sol Plaatjie, Fort Hare and Western Cape)	Between January 2017- 2020- March 2021	To address the general skills shortage within the sector through funding learnerships and bursaries	Support Youth Development Programmes
SAB, Nestle, Sea Harvest	From 2016 & 2017- March 2021	To provide core skills in organisations through skills training	Increase relevant skills available in the sector
University of Johannesburg	October 2019- March 2022	To establish a Research Chair for the FoodBev SETA that will improve the research capacity and in identifying the skills need for the fourth Industrial Revolution, as well as assist in improving the data managing systems of the SETA that feed into the SSP.	Improved and credible research data and research identified skills related to the fourth Industrial Revolution
Chinese Culture and International Education Exchange Centre **-(CCIEEC)-	January 2019- 31 December 2020	To facilitate work integrated learning for unemployed learners	Artisan development and work experience
WorldSkills SA and BRICS Skills Working Group	April 2013 -Ongoing collaborations	To create a platform to share and showcase trade qualifications via competitions and challenges.	To help with the standardisation and the improvement of traditional qualifications within the BRICS countries.
SETA partnership with MERSETA, SERVICES SETA	These are term commitments (April 2020) and due for expiry in March 2022	To uphold certification of programmes against nationally recognised qualification	Sectoral priority occupations and hard-to-fill vacancies

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 tool 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 and industry in capacitation of lecturers by providing on the job work experience so that the lecturers can understand firsthand what the industry requires which could potentially assist the lecturers with updating their curriculum, and 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	• A collaboration with WorldSkills SA as the collective voice for skills excellence and development in vocational, technological and service oriented careers around the globe. Its aim is to raise awareness amongst youth, as well as parents, teachers and employers. The sponsorships allowed the FoodBev SETA to award students an opportunity to get experience through competing with other institutions. It is a way of building capacity of students. The FoodBev SETA funded learners that competed in different trades both in Abu Dhabi and Russia. The next competition will be held in Shanghai in 2021. • 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	
•Small Enterprise Development Agency (SEDA) partnership for the development of SMMEs through the development of business-related skills. The partnership failed at the beginning stages due to disagreement on the costing models used by both partners concerned.	•Institutions of higher education where students sponsored by the FoodBev SETA drop-out or change courses during an academic year. This affects both the partners in negatively as the result is unmet targets and unskilled candidates. Thus, challenging the mandate of the FoodBev SETA.

4.4. NEW PARTNERSHIPS

The FoodBev SETA has prospective partnerships on skills development initiatives targeted at uplifting the skills of rural and township youth, women and people with disabilities and the impact of the COVID-19 pandemic which are still to be finalise in the next few months. Additionally, the SETA plans to form partnerships that will help to address the high numbers of unemployed artisans who have qualified but cannot get work experience post qualification and increase their initiatives towards small business.

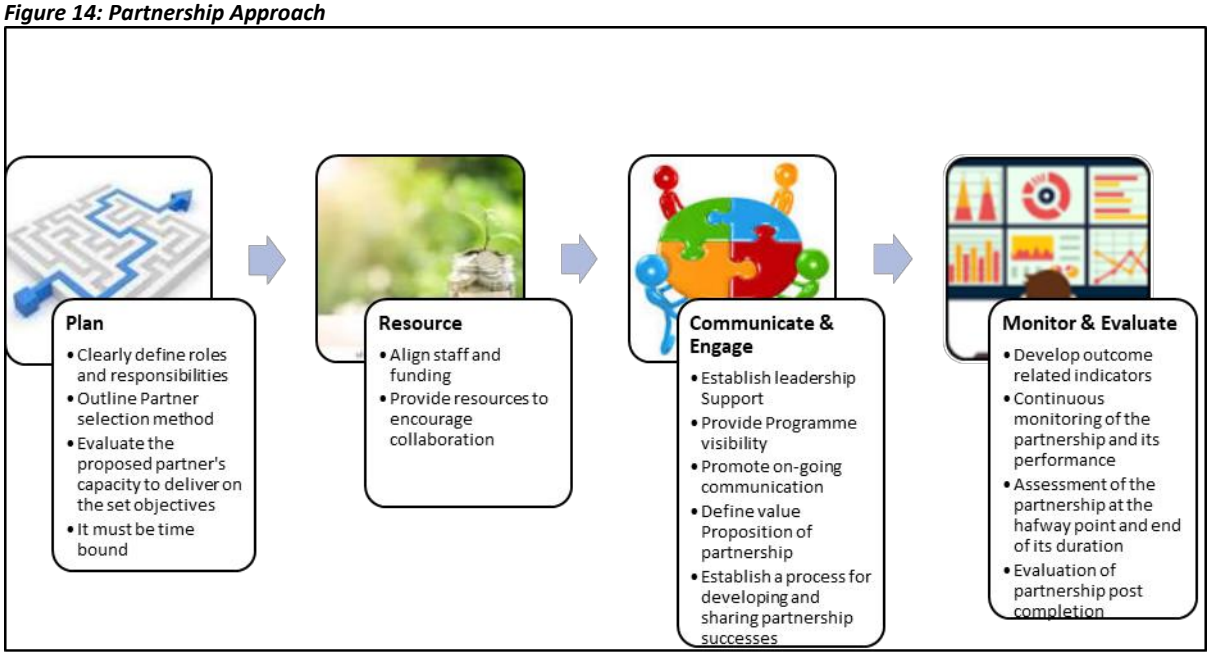
Table 14: New Partnerships

Name of institution/ partner organisation	Gaps that the partnership will be addressing	Objectives of partnership
GIBS Business School	Address the lack of women, especially African women in managerial and professional positions in the sector.	To transform the sector through the increasing the allocation of bursaries for relevant post-graduate studies targeted at African females.
Department of Labour and Employment (UIF)	Skills required for companies that are impacted by the COVID-19 pandemic and those that have been hard hit by the economy downturn and had to retrench employees	To implement of the Temporary Employers Relief Scheme (TERS). To retrain those who have been affected by retrenchment for them to either find alternative jobs or assist in creation of their own businesses (entrepreneurial skills)
Department of Women, Children and People with Disability	Women in power and decision-making. Institutional Mechanisms for the Advancement of women.	To outline priorities, aspirations & interventions for gender equality and women empowerment which will form part of women's interventions in the country
Institutions for people with disability	Address lack of training and development of people with disabilities	To transform the sector through different partnerships that are specifically aimed at capacitating people with disabilities with different skills development interventions
Emfundisweni Skills Centre	Uplift rural women in the bakery sector	To upskill and capacitate rural women who volunteer at the centre with the baking and confectionary skills and good manufacturing practices
Department of Small Business Development and SEDA	Small businesses in rural and township communities lack capital and business skills to sustain themselves	To support rural and township small businesses within the food and beverages manufacturing sector with running capital and business skills
National Economic Development and Labour Council (NEDLAC)	Training of Learners on Occupational Health and Safety (OHS) which has been highlighted as important training to undertake during the pandemic period.	To help prevent the spread of the COVID-19 virus in workplaces.
Quality Assurance for Trade and Occupations (QCTO)	Development of occupationally directed qualifications and part qualifications.	To develop occupationally directed qualifications and part qualifications. FBS will embark on external integrated summative assessments (EISA) and learning program development
South African College Principals Association (SACPA)	Improved communication and engagement between FBS and TVET colleges	Foster and strengthen relationships between FBS and TVET colleges
Department of Correctional services	It is envisaged that a prisoner is less likely to go back to crime if they have a meaningful job prospect or legitimate business. FBS will consider engaging the department in order to provide inmates with skills programs in baking and confectionary.	To provide meaningful training that will assist inmates become employable after completing their prison terms and be integrated into society. To assist in the reduction of crime by training inmates in developing meaningful and legitimate businesses from the skills they would have obtained whilst in prison.

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 14: 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

The primary purpose of this chapter is to reflect on the role and contribution of Monitoring and Evaluation (M&E) in sector skills planning and to provide 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: National Evaluation Policy Framework

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 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. There is a two-fold approach to M&E, which focuses on implementation progress through external moderations and site visits, and evaluation of impact and outcomes through research studies. Hence, the SETA adopts the Result Chain Logic Framework for M&E, as indicated in the schematic diagram below:

Figure 15: FoodBev SETA value chain and application of M&E

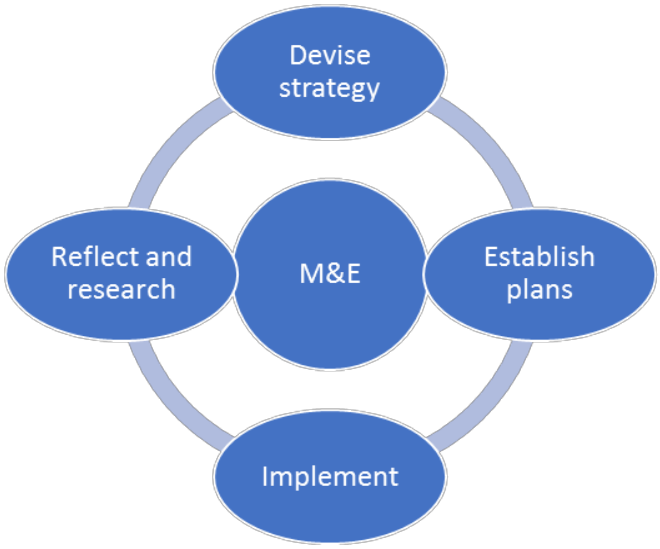
Monitoring of any function, first and foremost, starts within the department responsible for the task. Additional monitoring activities serve as internal controls aligned to areas of highest risk and is performed, in part, by the FoodBev M&E department. These monitoring activities relate predominantly to verification of compliance requirements associated with FoodBev SETA discretionary grants and could be expanded in support of the internal audit function. 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 final results. The research unit predominantly performs the current evaluation activities of the FoodBev SETA. 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.

Figure 16: M&E Cycle



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

The bulk of the FoodBev SETA's core strategic objectives are encapsulated within programme 3 of the Annual Performance Plan 2020/21. These include support to employed and unemployed learners in various learning programmes to address scarce and critical skills, students obtain qualifications and work experience, employees capacitated with numeracy and literacy, increasing participation of small businesses, and creating awareness amongst youth of careers available in the sector. These priorities were in response to the strategic priorities identified in the previous SSP, which included artisan shortages, low supply of matriculants and graduate learners into the sector skills pipeline, transformation in management, increasing research and innovation, gaps in employee skills, and career awareness amongst the youth.

The FoodBev SETA recently completed two tracer and impact studies on funded bursaries and internships during the 2019/20 financial year. The internship research project was conducted to track the whereabouts of the beneficiaries and the effectiveness of its internship programme. The bursary research project was to assess the success rate of the intervention and trace the whereabouts of the beneficiaries. The main findings from the studies were:

- Bursary Tracer and Impact Study: The bursary programme shows a 60% success rate; over 60% of those employed at the time of the study, were employed for more than a year in the sector; 95% thought that the qualification was relevant; 89% believe the bursary significantly assisted them.
- Internship Tracer and Impact Study: This study produced results which corroborates the findings of the previous tracer study (FoodBev SETA, 2019). The findings showed that the internship programme impacted positively on the beneficiaries and majority, 69% of the beneficiaries were employed; of the employed beneficiaries, 74% have permanent jobs and are employed in the private sector.

The conclusion is that these programmes are successful in addressing the scarce sector skills, and both employers and learners reported that the programmes were relevant and had a positive impact. Further, the bursary programme enables graduates to support their career growth. The SETA has considered the recommendations from these studies in the development of the annual plan.

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.

In addition to reflecting on the past, information obtained from the recent focus groups provided further insight concerning participation by and support for small businesses and employee skills gaps. The main observations include:

- Small businesses in the sector have highlighted a need for funding of business, management and entrepreneurial knowledge and skills as opposed to technical skills, and this may explain the persistent under-achievement of small business targets;
- There is a need for funding of Non-Pivotal technical training offered by industry associations and the like.
- Dropout rates in funded learnerships for unemployed individuals are high with the main contributing factor cited as low stipends, FoodBev SETA increased the stipend amount for unemployed individuals and follow-up research needs to be completed to determine the impact of the increase.
- Participation by new employers in discretionary grants is relatively small. The appointment of a Senior Manager: Chambers is intended to address this, amongst other stakeholder matters.

From both quantitative and qualitative perspectives, strategic objectives have been partially realised but can be improved. Research findings have also resulted in the need for further exploration of funding requirements, employer participation objectives, and the quality of programme content. These will be addressed in future to inform planning and further continuous improvement.

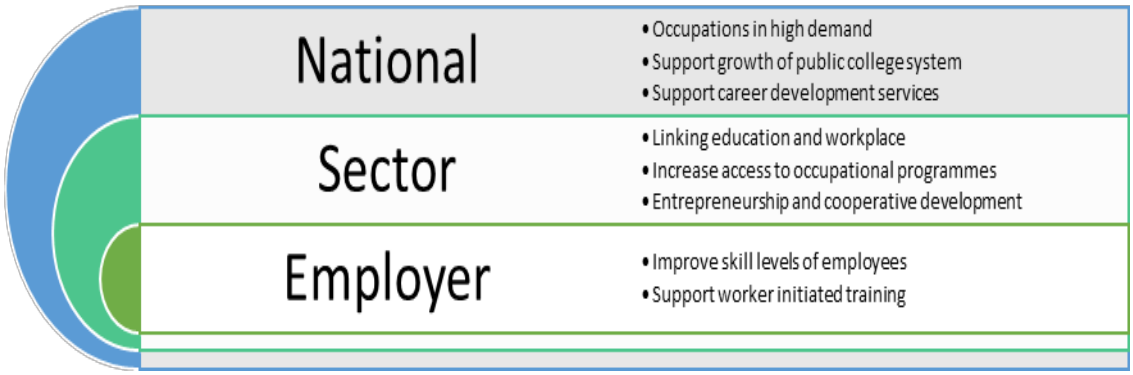
5.5 PLAN OF ACTION

There are areas within the FoodBev SETA Monitoring and Evaluation Strategy that can be strengthened. Roles and responsibilities in the M&E value chain across departments should be made 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 planned merging of the research, planning, monitoring and evaluation functions. The implementation of the revised structure has however been placed on hold due to the reduction in SDL contributions in response to the COVID19 National Disaster.

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 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 was aligned with the eight outcomes specified in the NSDP. These outcomes will have to be addressed at an employer, sectoral and national level per the diagram below.

Figure 17: NSDP Outcomes



The FoodBev SETA M&E plan and activities will be 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 research plan contains diagnostic, impact and economic evaluations to inform future planning and participation. The research plan, however, needs to be 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, 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 compared to other manufacturing sectors. It has showed a relatively stable employment rate from year to year and WSPs 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. The impact of COVID-19 on the sector is discussed in detail but due to ongoing research of the topic and a lack of South Africa data on specific matters, no solid conclusions can be made yet on the changes that need to be planned for. Furthermore, chapter one reveals the current employment of people with disabilities sits at 0.06% 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, nutritional foods, technology, drought and expansion 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. 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. The health, food safety and technological drivers are expected to experience the most significant changes

Chapter Three: The shortage of professionals and industry specific occupations in the sector captured in the chapter were derived through an analysis of demand and supply of skills. The analysis revealed a decrease in the demand for technical occupations (trades) for the coming year but revealed a higher spending towards those occupations in the 2019/20 financial year. This might be an indication of the increased support of these occupations over the years to increase the provision of technical skills. The quality throughput rate from higher education institutes for learning programs relevant to the Food and Beverages Manufacturing Sector, as highlighted in this chapter, needs to be addressed. 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, SACGC, 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 SMMEs 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 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. This change will be monitored closely in the next coming years as the SETA continues to prioritise national priorities and sector needs.

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 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.

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 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 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.
- Development of a 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 SMMEs.

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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