



Exploring competitive intelligence practices to enhance growth of the agro-processors in Limpopo Province

Jethro Chinyavada

*College of Economic and Management Sciences, Department of Business Management,
University of South Africa, Pretoria, 0003 South Africa*
47235926@mylife.unisa.ac.za

Nisha Sewdass

*College of Economic and Management Sciences, Department of Business Management,
University of South Africa, Pretoria, 0003 South Africa*
sewdan@unisa.ac.za

Received 28 November 2023 Accepted 14 December 2023

ABSTRACT In order to improve the growth prospects for agro-processors, this article explores the realm of competitive intelligence practices within the agro-processing sector in Limpopo Province, South Africa. This study was inspired by the province's abundant agricultural resources, which have the potential to stimulate the growth of the agro-processing industry. Despite having a wealth of resources for value addition, the Limpopo Province has difficulties as seen by its high unemployment rates and relatively low economic growth when compared to other South African provinces. One of the main causes of this gap is the lack of growth in the agro-processing industry. To promote the development of agro-processors, the research paper focused on exploring competitive intelligence practices that are being used by the agro-processing industry in Limpopo Province and to determine the role of competitive intelligence in strategising and decision-making in the agricultural industry. The study aimed to provide strategy enhancement and decision-making optimisation within agro-processing enterprises operating in the Limpopo Province.

This study was qualitative in nature and adopted an exploratory design as well as utilising a multi-case strategy. Data was collected from eight agro-processing subsectors in Limpopo Province. Semi-structured web-based questionnaires and open-ended telephone interviews were used as data collection instruments. The study was cross-sectional in nature whereby data was collected once and over a short period of two (2) months. The research's target population was 130 agro-processors registered under the Sub-Directorate Agro-Processing and Value Addition Services within the Agribusiness Support and Development Directorate of the Limpopo Department of Agriculture and Rural Development. The study sample comprised of twenty CEOs and twenty managers, selected through non-probability purposive sampling. CEOs responded to web-based questionnaires, while managers participated in telephone interviews. The primary data gathered underwent thematic analysis, facilitated by Atlas.ti version 28 windows computer software, which aided in data coding. The result of this research provides a thorough review of competitive intelligence practices and their functions in the agro-processing sector. The findings emphasised the various strategies used by agro-processors to successfully navigate a competitive market, and they show the significance of obtaining and applying competitive intelligence to guide strategic choices and increase growth.

KEYWORDS: Agro-processors, competitive advantage, competitive intelligence, decision-making, growth, strategising

1. INTRODUCTION AND BACKGROUND

Agro-processing companies in Limpopo Province encounter challenges that emanate from fluctuations in micro and macro-economic elements, market dynamics as well as climatic conditions (Mwale, Ndlovu & Zuvarimwe, 2021). These challenges prevent agro-processors from performing competitively (DALRRD, 2020; Mwadzingeni, Mugandani & Mafongoya, 2020). Furthermore, growth, sustainability and level of competitiveness at local and international standards are difficult to achieve unless there is innovation, high production and investment in modern technology for future prosperity of this sector (BFAP, 2020; Balkrishna, 2021). This sector also fails to develop appropriate strategic plans that may assist them to transform into viable businesses (Mmbengwa, Ramabu, Rakuambo, Tembisa & Qin, 2019; Reena, 2021).

In this regard, failure by the agro-processors to formulate appropriate strategies and decisions has resulted in failing to perform competitively. As a result, large quantities of unprocessed goods with low economic value are exported and in turn they import expensive processed products (Fukase, 2016; FAO, 2020; Department of Agriculture and Rural Development (DARD), 2022). This situation is negatively affecting the drive to create jobs in Limpopo and South Africa as a whole and to improve the gross domestic product (GDP) of the country. This is exacerbated by failure to strategise and develop proper decisions (Mlambo, Mukarumbwa & Megbowon, 2019). Therefore, it is necessary to explore new and innovative processing methods, tools and techniques that can be used to assist this sector to improve their strategising and decision-making process so that the growth and competitiveness of this sector can be improved.

Researchers have emphasised the need to improve the performance of the agro-processing sector as it also promotes the growth of the agricultural industry (Mulangu, 2015; Matlala, 2022).

Intervention strategies should be designed to develop the agro-processing industry, creating good environment that enhances the growth of locally owned processors (Food and Agriculture Organization (FAO), 2020; Matlala, 2022). These strategies should ultimately promote high productivity, industrialisation, job creation, income generation and reduction in cost of food (African Development Bank, 2018; Limpopo Department of Agriculture & Rural Development, 2021). In this context, there is a need to boost the performance of the agro-processing industry and for a combined effort to invest and revitalise the agro-processors so that they contribute to provincial industrialisation and also prevent the importation of processed products that in turn increases the import bill (DAFF, 2020; DARD, 2018).

Arrigo (2016) purports that organisations that develop their strategies continuously and based on the utilisation of CI practices will improve their competitiveness as compared to those that do not implement CI practices. CI when successfully implemented, could possibly ensure that these firms have knowledge of their markets, competitors, suppliers, other stakeholders, risks and opportunities. Competitive intelligence as a process assists management of enterprises in decision-making and to have knowledge about the market, and this could ultimately lead to high production and growth of the sector (Louw & Venter, 2017). Additionally, CI gives advance warning on competitor initiatives, behaviour of suppliers, economic environment, customer needs, technological developments and marketplace conditions (Louw & Venter, 2017).

The researchers assumed that the agro-processors in Limpopo are implementing some CI practices in a non-formal manner without realising this, hence exploring how to improve the formal implementation of CI processes by the agro-processing industry in Limpopo Province could assist them to enhance their competitiveness and growth. Mlambo et al, (2019) stated that the agro-processing firms should produce, expand and

sell more processed goods because they are sold at a higher value, resulting in generating more income. In this regard, strategists in agro-processors need creative processes for helping them to develop new strategies, venture into new opportunities and counter risks and competitive intelligence can provide information to aid in new product development, understanding competitors' products and consumers' needs (Bloomenthal, 2022).

In light of this background, CI could generate information for agro-processors in Limpopo about the competitive business environment and they will be able to develop appropriate strategies that could enhance competitiveness and growth of their businesses. In addition, Competitive Intelligence can be regarded as a useful process for agro-processors to assist them in upgrading operation efficiency, keeping informed of local and international market trends and their possible effect on their businesses (Sewdass & Du Toit, 2014).

Hence, the objectives of this study were to:

- Explore what, if any, competitive intelligence practices are used by the agro-processing industry in the Limpopo Province.
- Determine the role of competitive intelligence in strategising and decision-making in the agro-processing sector.
- Determine how strategising and decision-making can be improved in order to enhance growth of the agro-processors in Limpopo Province.
-

2 LITERATURE REVIEW

2.1 Definition of competitive intelligence

Strategic Consortium of Intelligence Professionals (SCIP) (2023) define CI as: “*a discipline that enables organisations to reduce strategic risk and increase revenue opportunities by having a deep understanding of what has happened, what is happening, and what may happen in their operating environment*”. According to Yun (2020), Competitive intelligence is the process of identifying information needs of organisations, acquiring and processing it into intelligence usable by decision-makers. Diyaolu (2019:2) posits that CI can be regarded as “*a purposeful and orderly*

approach of monitoring competitors, located in any place and wherever they might be”. Yun (2020); Vanissa, Widarmanti & Irawan (2021) describes CI as a process of analysing, monitoring customers, suppliers, competitors and other industrial forces. For the purpose of this study, CI will be regarded as a process that generates intelligence information that assists managers in strategising and decision-making in order to enhance the growth and competitiveness.

2.2 Contributions of competitive intelligence (CI)

Businesses explore their markets, suppliers and consumers through the implementation of CI in order to understand the competitive environment (Calof, 2020). A study by Paap (2020) indicates that competitive intelligence (CI) provides information that facilitates the advancement of new products, services, technologies and ensures that better decisions are taken through ensuring that the business gathers the most precise information regarding consumer needs, competitive environments and technological options. Competitive intelligence, according to Surico (2020) is essential in businesses as it assists in improving marketing effectiveness, increase sales, product planning, product development and strategies for investment.

Knowledge about a company's strengths and weaknesses in domestic and international settings is gathered through competitive intelligence (Dou, et. al, 2020). Studies by Nenzhelele (2014); Amiri, Shirkavand, Chalak & Rezaeei (2017); Jafar (2021); Crayon (2020); Diyaolu (2019), revealed that competitive intelligence generates actionable intelligence that ensures that enterprises gain competitiveness. Nearly every organisation that has implemented CI has experienced positive outcomes (Jafar, 2021; Crayon, 2020). A study by Crayon (2020) carried out on CI professionals revealed that businesses can take strategic and tactical actions based on intelligence generated from CI programs. Sewdass & Calof (2020); Du Toit (2013); Jafar (2021) & Diyaolu (2019) added that CI assists in innovation processes. In this regard, when competitive intelligence activities are properly implemented, competitiveness and growth of

the agro-processing industry in Limpopo Province could be enhanced.

2.3 Competitive intelligence practices in South African firms

According to previous research, several South African companies are implementing CI for survival in the current global competitive environment (Sewdass & Calof, 2020). A study by Kuhn, et al. (2020) revealed that the implementation of competitive intelligence (CI) practices in South Africa is growing and formalized. Kuhn, et al. (2020) add that South African businesses tend to be ahead of their counterparts in Africa when it comes to the implementation of CI. CI activities are performed in departments or units using different names such as market insight or business intelligence instead of the traditional known term, competitive intelligence (Kuhn, Viviers, Sewdass & Calof, 2020). According to a study by Nenzhelele (2016), the South African real estate industry uses CI to obtain a competitive edge, produce high-quality judgements, and follow the law and ethical standards. Fatti & du Toit (2013) conducted an independent study which confirmed that pharmaceutical businesses in South Africa regularly use Competitive Intelligence (CI) during decision-making to manage competition effectively. However, no evidence of CI practice or implementation in the agro-processing industry in South Africa has been noted.

2.4 State of the agro-processors in Limpopo

Value-addition to agricultural products through agro-processing significantly provides prospects for boosting agriculture's economic effect in Limpopo Province (Myburgh & Zitha, 2020). Limpopo Province has a variety of key agro-processors that specialise in horticultural, pork, venison and beef processing (Myburgh & Zitha, 2020). In addition, Limpopo Province has abundance of fruits and vegetables that contribute significantly to the export basket of South Africa and the province's percentage contribution to national agriculture is 7.6% (Global Africa Network, 2020). Therefore,

the province of Limpopo's availability of fruits and vegetables encourages the growth of agro-processors (Maponya, 2021). Cotton, tomatoes produced by ZZ2, and avocados in Letaba and Tzaneen contributes exponentially to the exports from South Africa to the Chinese market (Matlala, 2022). According to Reena (2021), there is a shortage of tomato paste in South Africa, although ZZ2 alone, a tomato growing company in Limpopo, produces 160 000 tons of tomatoes each year (Department of Agriculture, Land Reform and Rural Development (DALRRD), (2021). Limpopo provincial government has spear-headed an economic plan named the Revitalisation of the Agriculture and Agro-processing Value Chain (RAAVC) to improve agriculture and agro-processing activities in the province (Department of Agriculture, Forestry and Fisheries, 2020). The benefit for this economic plan is yet to be realised.

A research report by Department of Agriculture, Forestry and Fisheries (2020); Maponya (2021) indicated that one of the challenges faced by agro-processors in Limpopo Province is selling their products locally, thereby earning less income. Therefore, agro-processors must export their products (Limpopo Department of Agriculture, Land Reform and Rural Development (LDALRRD), (2021). Hence, it is critical for agro-processors in Limpopo Province to improve the quality of their products for export in order to satisfy the varied needs of this wider global consumer base (LDALRRD, 2021); and this is another strategy for entering into new markets and increasing income (Global Africa Network, 2020). The establishment of The African Free Trade Area (AfCFTA) has brought notable opportunities for agro-processors to broaden their markets through promoting exportation of products. The African Free Trade Area (AfCFTA) presents a significant opportunity for agro-processors to expand their market reach and improve their products for export (FAO, 2021). Therefore, agro-processors in Limpopo should capitalise the opportunities brought by the African Free Trade Area (AfCFTA) to improve and grow their trade.

3 RESEARCH METHODOLOGY

The research questions generated from the objectives of this study are:

- What competitive intelligence practices are being used by the agro-processing industry in Limpopo Province?
- What role does competitive intelligence practices play in strategising and decision-making in the agro-processing industry?
- How can strategising and decision-making be improved in order to improve growth of the agro-processors in Limpopo Province?

This study was exploratory in design and employed an interpretivist philosophy and used a multi-case study strategy. Furthermore, the study was qualitative in nature, aligning with the principles of interpretivism as described by Saunders, Lewis & Thornhill (2019). Semi-structured web-based questionnaires and open-ended telephone interviews were used as data collection instruments as prescribed by qualitative research (Cooper & Schindler, 2014). The current study was cross-sectional whereby data was collected once and over a short period of two (2) months. The target population were 130 agro-processors found in Limpopo Province that are registered with the Sub-Directorate Agro-Processing and Value Addition Services within the Agribusiness Support and Development Directorate of the Limpopo Department of Agriculture and Rural Development. Out of 130 agro-processors, 40 were sampled using non-probability purposive sampling. In this regard, the researcher selected participants based on personal judgement that they will provide essential data that will assist in answering research questions. It should be noted that there are also several other small and medium-sized agro-processing enterprises operating in Limpopo Province (Manasoe, Mmbengwa & Lekunze, 2023), however, they are not registered with any registration body. This study focused on registered agro-processors because they are more likely to use competitive intelligence.

The participants from the sampled agro-processors were top executives who are involved in strategising and decision-making, and these were twenty (20) CEOs from 20 agro-processing companies, and twenty (20) managers who are involved in

the implementation of the strategies and in the day-to-day operations of their organisations, and were selected from another 20 agro-processing companies. CEOs responded to web-based questionnaires and managers responded to telephone interviews. These participants were drawn from the 8 agro-processing subsectors: meat processors, fruit and vegetable processors, grain meal products producers, alcoholic beverage manufacturers, non-alcoholic beverage manufacturers, animal feeds producers, wood and wood products processors and bakery products manufacturers. A pilot study was conducted to test the validity and reliability of research instruments. The goal was to determine respondents' understanding of the research instruments and how they responded to questions so that appropriate amendments could be instituted prior to undertaking a full-scale data collection.

Five (5) CEOs and 5 managers participated in the pilot study. CEOs tested the validity of the questionnaire, while managers tested the reliability of the interview questions. Pilot study findings showed that the researchers used straightforward language and clear wording in the research instruments and participants considered the questions as understandable and clear. Data was collected through emailing web-based questionnaire to Chief Executive Officers, while General Managers were requested to participate in telephone interviews that were scheduled at their convenience. Data for this study was analysed through thematic analysis, with the aid of Atlas.ti version 28 windows computer software. Thematic analysis began with getting acquainted with the dataset and obtaining a basic comprehension of the unprocessed data. Codes were created by classifying data segments pertaining to the study objectives. The coded data was reviewed with the aim of identifying major trends and patterns. To make sure that the themes identified were in line with the data, they were examined for coherence and inconsistencies. Finally, themes were identified and named.

4 RESEARCH FINDINGS

All twenty (20) web-based questionnaires that were sent to CEOs were filled out and

returned, yielding a 100% response rate. On the contrary, a 90% response rate was attained for telephone interviews since only 18 of the 20 managers consented to take part in the interviews.

4.1 Demographic information of participants and companies' background information

CEOs and managers had varying duration of experience in their respective companies, with CEOs having between 8 and 21 years of

experience, and managers having between 7 and 25 years of experience. The participants' extensive experience indicated that they possess significant expertise in strategizing and decision-making and operations, enabling them to provide valuable insights that contributed to answering the research questions.

Of the thirty-eight (38) companies that participated in this study, CEOs and managers were selected across all eight agro-processing subsectors as noted in table 1.

Table 1. Composition of study participants

Agro-processing subsector	Total number of agro-processing companies selected from each subsector	Number of CEOs that participated in the study	Number of managers that participated in the study
Meat processors	5	2	3
Fruit and vegetables processing	4	2	2
Grain mill products producers	5	3	2
Alcoholic beverage manufacturers	5	2	3
Non-alcoholic beverage manufacturers	5	3	2
Bakery products manufacturers	5	3	2
Animal feeds producers	4	3	1
Wood and wood products processors	5	2	3
Total	38	20	18

With regard to the number of years participating companies had been in

operation, Figure 1 shows a total of 38 companies spread across eight subsectors.

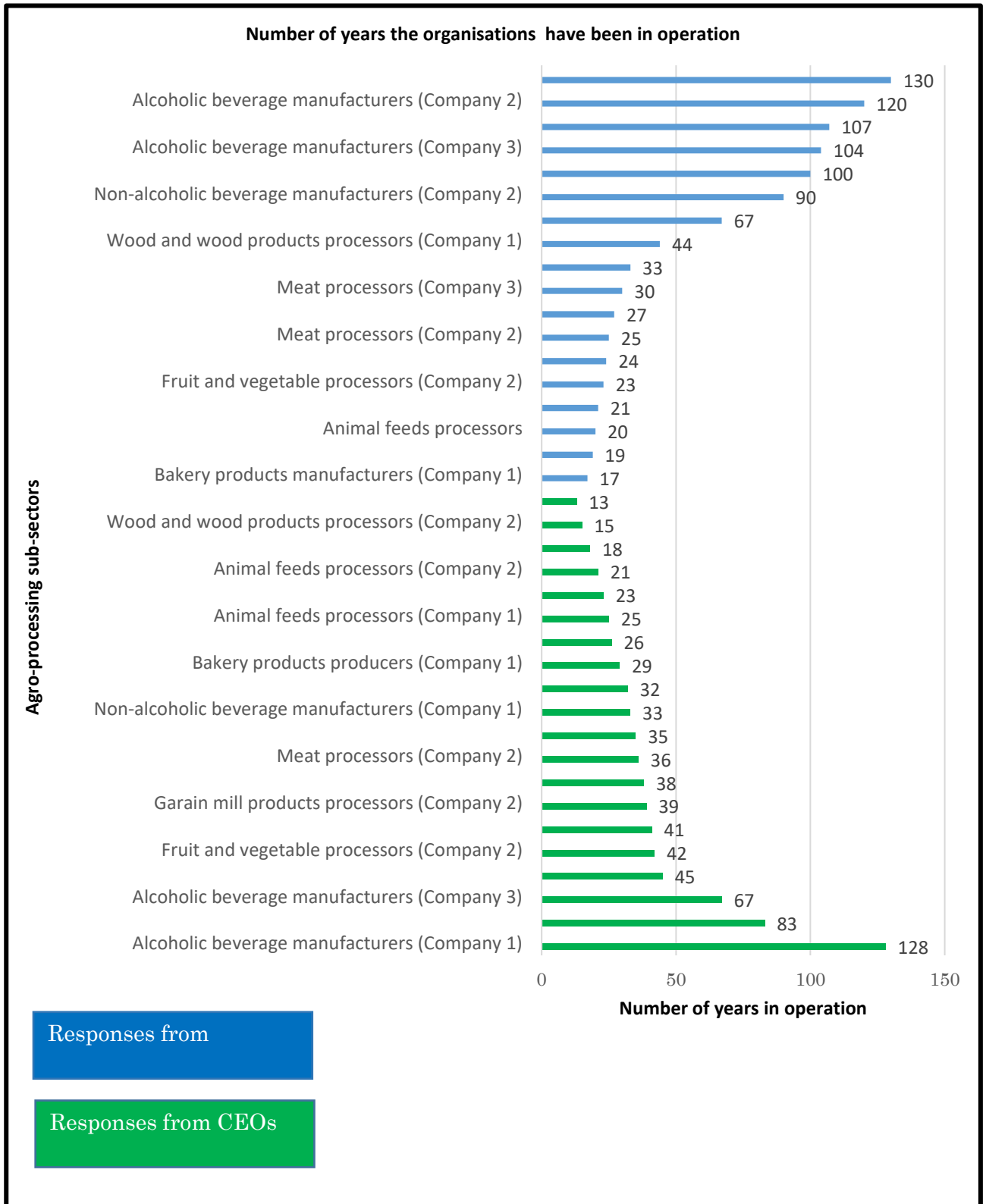


Figure 1. Number of years of company operation

Figure 1 indicates that the number of years the agro-processing companies have been in operation ranged from 13 to 130 years revealing that some of these companies have been around for a very long time and still

seem to be struggling with growing their agro-processing ability. To determine the core duties and responsibilities of CEOs and managers, participants were requested to indicate what their core duties in their organization were.

Responses showed that CEOs' core responsibilities and duties were more inclined towards the strategic focus of the company such as (corporate governance, communicating with the Board of Directors, external relations, leading senior management teams, monitoring financial progress, risk management and strategic planning). However, managers are involved in the tactical execution of operations such as (overseeing daily company operations, budgeting for departments, creating positive customer relationship, resource allocation and managing employees).

In trying to establish the staff composition of the organisations, it was found that some agro-processing companies (60.53%) employed permanent staff only while others employ both permanent and temporary/seasonal staff (39.47%). The minimum number of permanent staff employed was 30 and a maximum of 135, whereas the minimum of temporary/seasonal staff was 10 and a maximum of 25. The three subsectors that employ the largest number of both permanent and seasonal staff are grain mill products producers, non-alcoholic and alcoholic beverage manufacturers.

4.2 Competitive intelligence practices of the agro-processing industry in Limpopo Province

In trying to determine the CI practices of the agro-processors in Limpopo, the following responses were received from the CEO's and managers:

4.2.1 Presence of a formal department responsible for collecting information about competitors and the business environment

Regarding the presence of a formal department responsible for collecting information about competitors and the business environment, 20% of the participants indicated that there were no formal department, but every employee is responsible for gathering information. These findings are consistent with the study outcomes by Fatoki (2014), who revealed that CI is an activity for everyone in the organisation, hence appropriate and organised structures that have support of all employees must be created. However, the majority of participants (80%) explained that there was a formal department that collects information about competitor activities and the business environment. The departments responsible for collecting this information is represented in Figure 2 for the responses from the CEOs and Figure 3 for the managers.

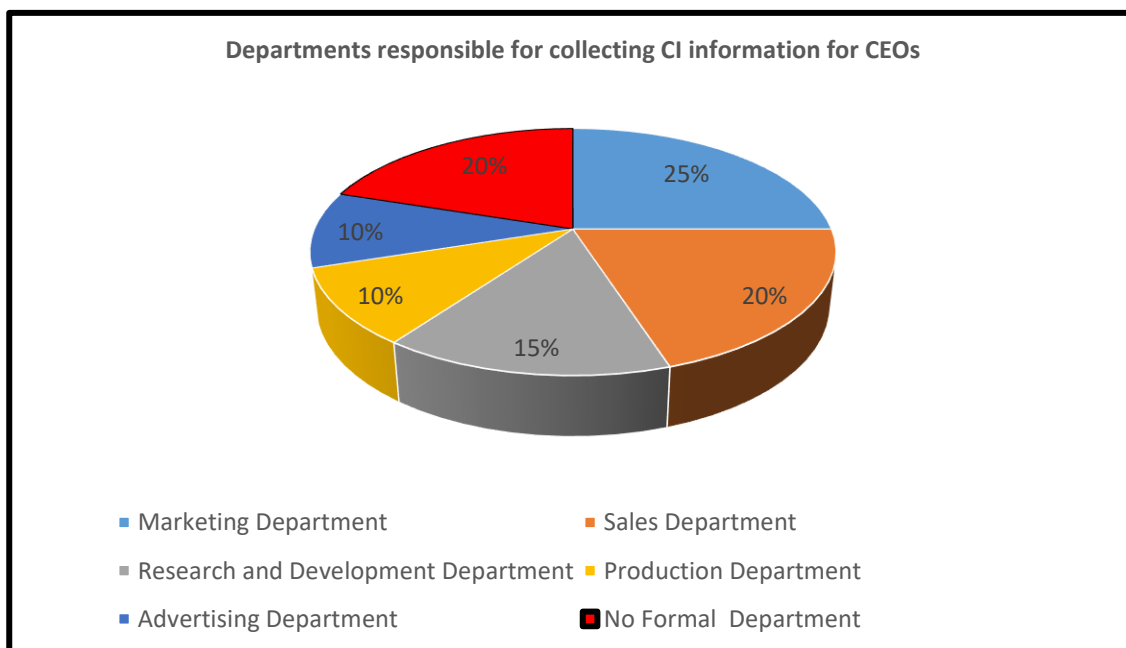


Figure 2. Departments responsible for collecting CI information for CEOs

Figure 3 indicates the departments that collect CI information for the managers of Limpopo's agro-processing businesses. Study findings further revealed that there are five departments that are tasked with collection of information about competitors and the business environment and there is no department that is specifically called Competitive Intelligence Department. The marketing, sales, research and development, finance and purchasing departments are the main departments that provide intelligence to managers. CEOs and managers' responses indicate a certain level of uniformity in the departments that gather CI data, with marketing and sales serving as the main ones. Managers, however, offered a wider variety of

departments engaged in CI activities. In this regard, a study by Sewdass & Calof (2020) confirmed similar results that several South African companies are implementing CI for survival in the current high global competition.

4.2.2 Sources consulted to obtain information about competitors and the business environment

Pertaining to sources consulted for information about competitors and the business environment, Figures 4 and 5 indicate eight different sources of information consulted by CEOs and managers.

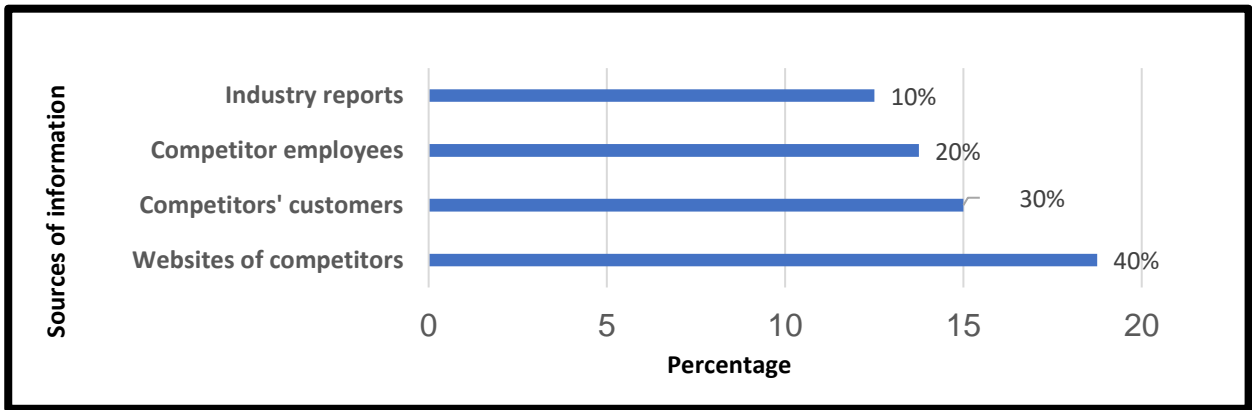


Figure 4. Sources of information consulted by CEOs

According to Figure 4, CEOs consulted four main sources of information. Websites of competitors and their customers were most consulted. These findings are consistent with the research findings

conducted by Vistorškyte (2021), which revealed that the main sources of competitive intelligence information are websites of competitors and competitors' customers.

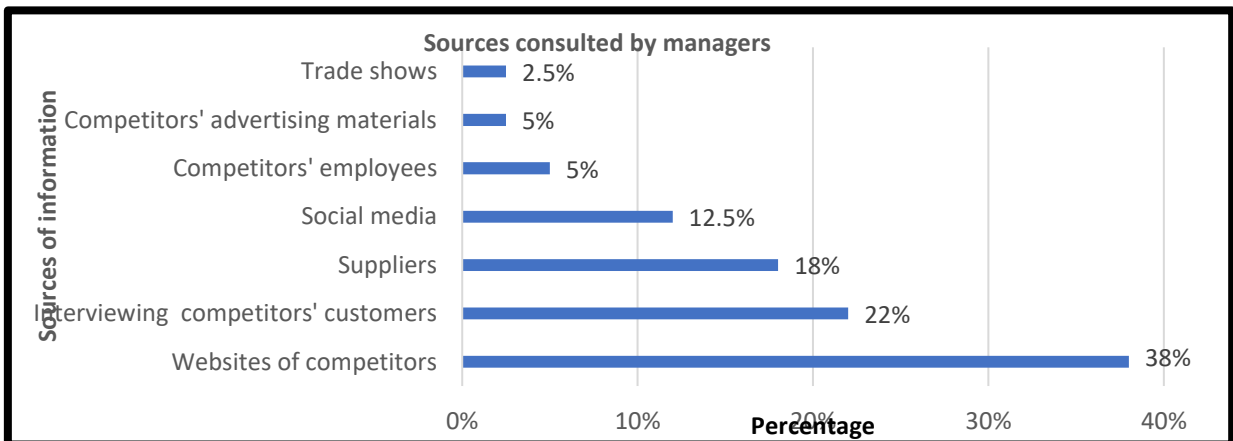


Figure 5. Sources consulted by managers

Figure 5 illustrates the sources consulted by managers and seven sources were identified. The most commonly consulted sources are websites of competitors, competitors' customers, suppliers and social media. A comparative analysis of the sources consulted by CEOs and managers reveals that websites of competitors and their customers were consulted by both CEOs and managers. Overall, data presented in figures 4 and 5 assist in understanding the sources that agro-processors utilise when they are gathering data about competitors and the business environment. Furthermore, the data displayed a diversified approach to intelligence collecting while also highlighting the range of CI sources.

Knowledge of information sources can be the foundation for agro-processors to modify their CI practices through gaining insights from a variety of sources in order to make informed decisions. Studies by Manullang (2019) and Chitonge (2021) concur that having essential information can help agro-processors thrive, therefore understanding information sources is essential for efficient information collection.

4.2.3 Methods of analysing data gathered about competitors and the business environment

Participants mentioned five (5) data analysis methods as shown in Figure 6

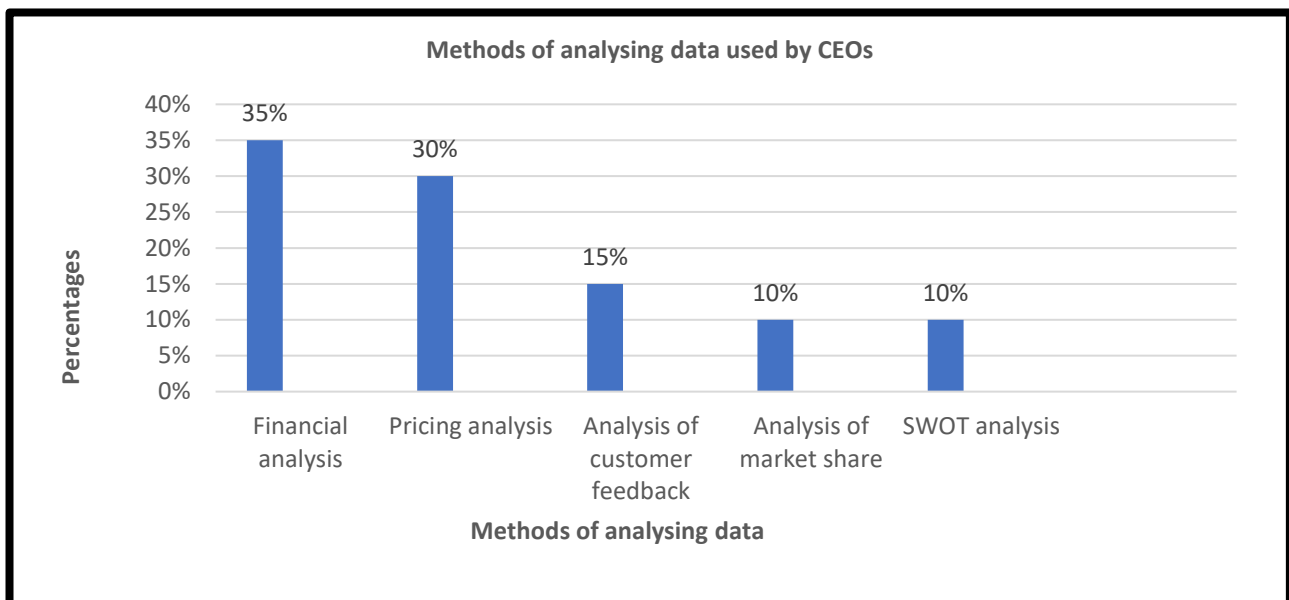


Figure 6. Methods of analysing data used by CEOs

The data presented in Figure 6 provides a thorough review of the methods of analysing data used by CEOs and the percentage usage rate of each method. Five (5) methods used are financial analysis, pricing analysis, analysis of customer feedback, analysis of market share and

SWOT analysis. Fleisher & Bensoussan (2015) indicated that data analysis is one of the competitive intelligence implementation stages. Therefore, these agro-processors are practising some form of competitive intelligence.

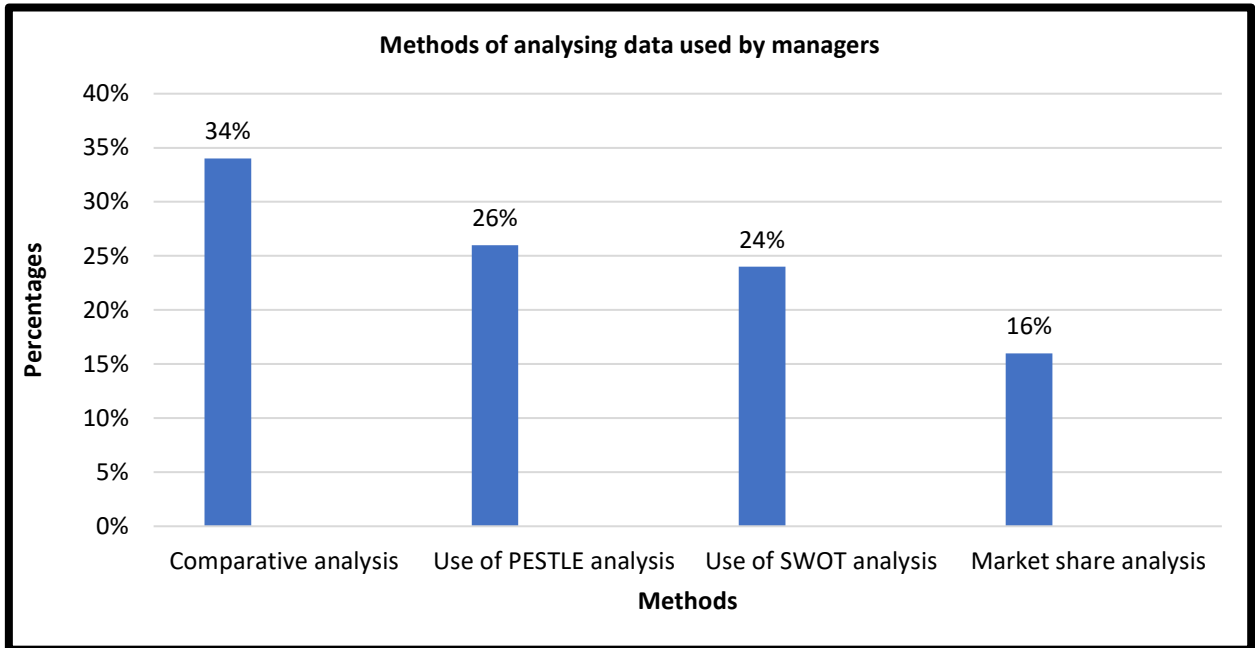


Figure 7. Methods of analysing data used by managers

According to Figure 7, managers mentioned four methods of analysing data. Among these methods, comparative analysis, PESTLE analysis and SWOT analysis are the most commonly used methods. Upon comparing the two participating groups, it is clear that managers and CEOs utilised different methods.

making in the agro-processing sector, the researchers looked at the types of data that was collected about their competitors and the business environment. This provided some understanding about the possible purposes(roles) that the collected intelligence was used for.

4.3 Role of CI in the agro-processing companies

4.3.1 Types of data collected about competitors and the business environment

In order to determine the role of competitive intelligence in strategising and decision-

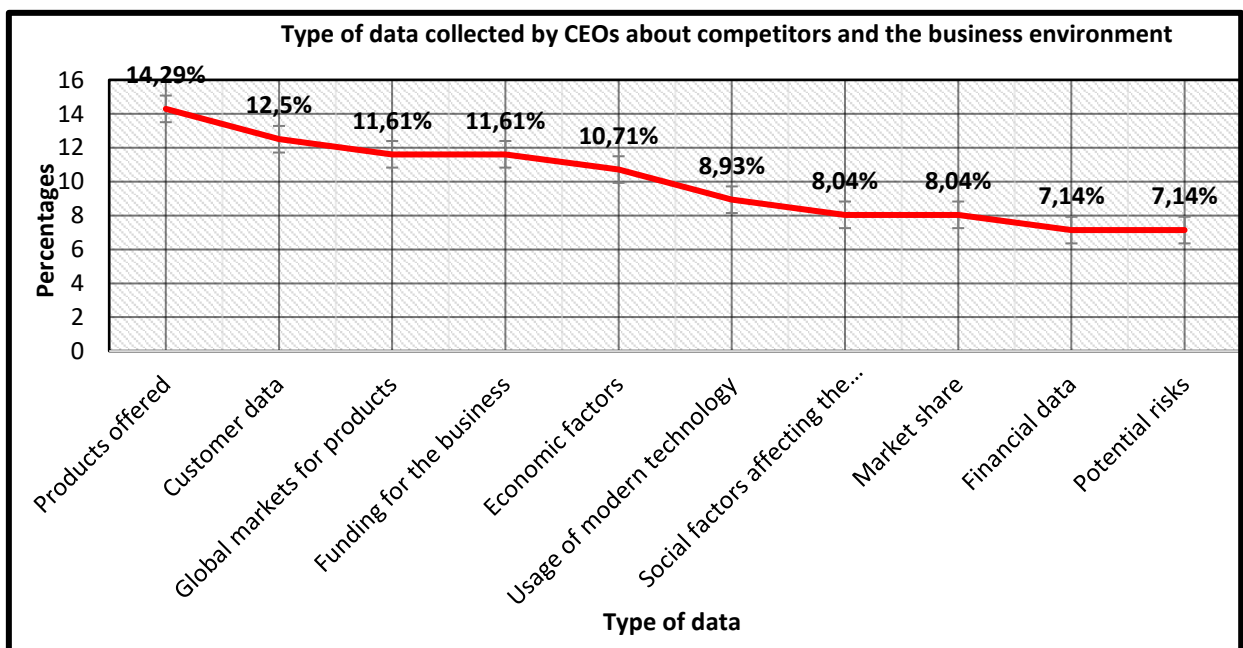


Figure 8. Type of data collected by CEOs about competitors and the business environment

CEOs use a wide variety of data for supporting the decisions they make (see Figure 8). They place a high priority on understanding competitors' products, customers, international markets for their products and obtaining capital for their businesses and assessing the state of the

economy. These findings align with the study findings by Asghari, Targholi, Kazemi, Shahriyari & Rajabion (2020) that organisations must gather CI information about competitors' customers, suppliers, products and markets.

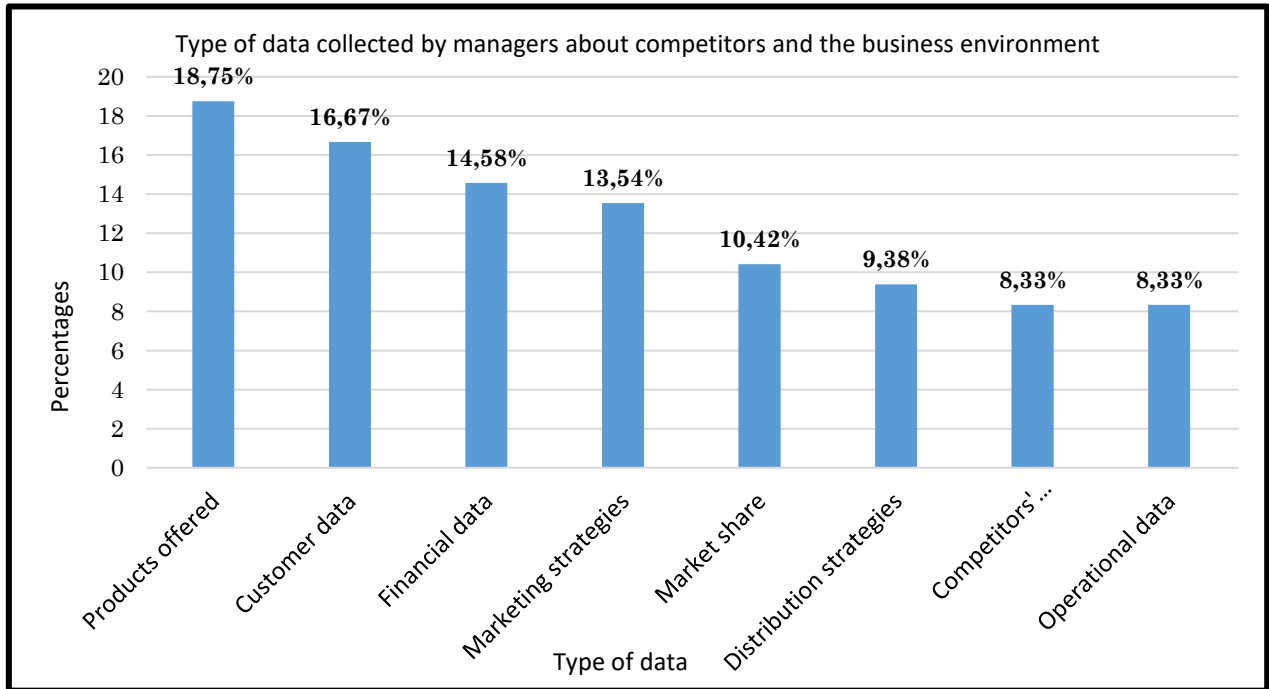


Figure 9. Type of data collected by managers about competitors and the business environment

As illustrated in Figure 9, managers focus on collecting data about competitors' products, customers, financial data marketing strategies and market share. Both CEOs and managers value data about competitors' products and their customers (see Figure 8 and 9). However, CEOs gather data that assists in making strategic decisions, whereas, data collected by managers assist

in making daily operational decisions as was indicated by the roles that they play in their respective organisations.

4.3.2 Uses of information collected about competitors and the business environment

The underlying responses were obtained with regard to the uses of information collected about competitors and the business environment:

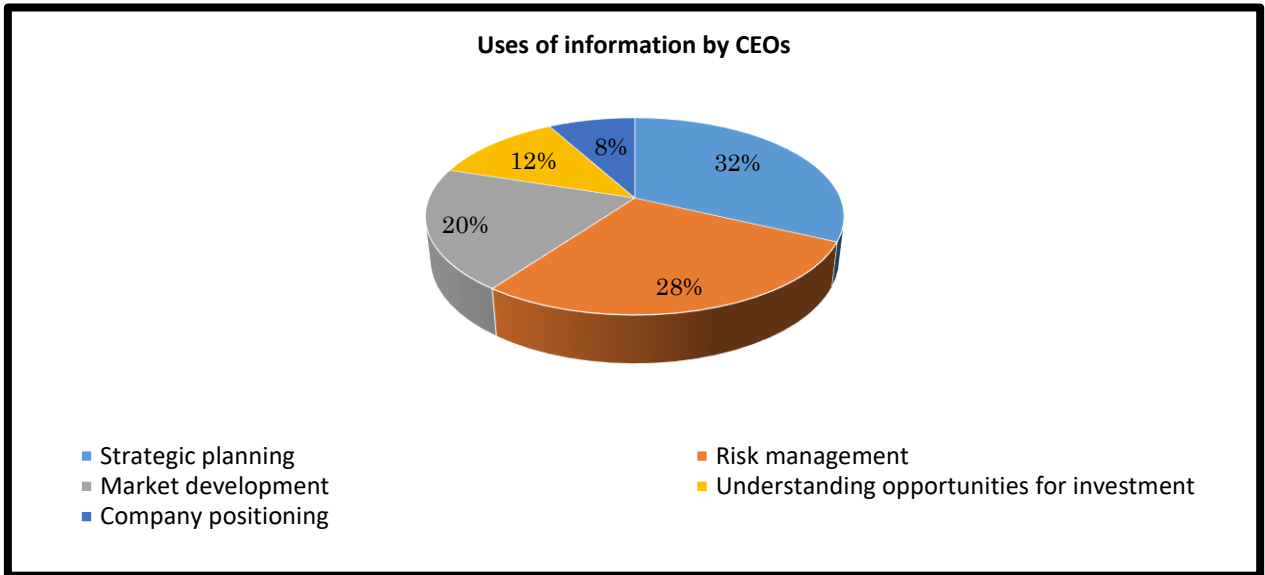


Figure 10. Uses of information by CEOs

Figure 10 illustrates five uses of information by CEOs and the most frequently use of information are strategic planning, risk management and market development. Furthermore, the data shows that CEOs use the information for long-term success of their businesses.

Figure 11 illustrates the use of information by managers, and six uses were revealed and these uses are related to their daily performance of their duties.

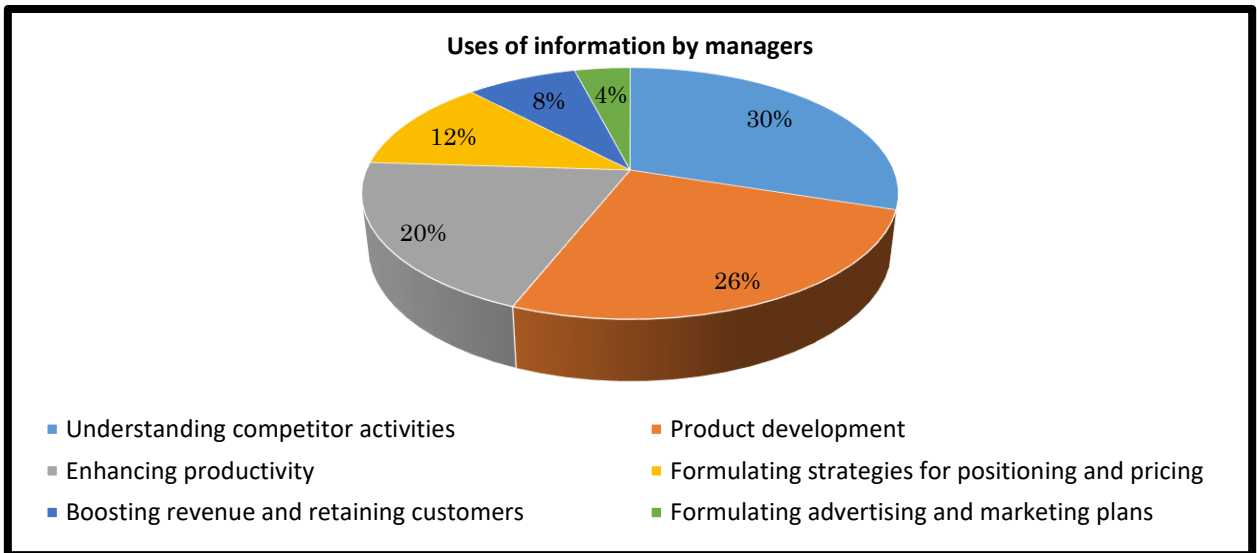


Figure 11. Uses of information by managers

According to Figure 11, the mostly frequently uses of information are for understanding competitor activities, product development and for increasing productivity. These findings were also consistent with the study by Paap (2020) that competitive intelligence (CI) provides information that facilitates the advancement of new products, services,

technologies and ensures that better decisions are taken through ensuring that the business gathers the most precise information regarding consumer needs, competitive environment and technological options.

4.3.3 Methods used by CEOs and managers to evaluate the use of data to see whether it produced the expected results

Table 2. Methods used by CEOs and managers to evaluate the use of data to see whether it produced the expected results

No.	Method of evaluating the use of data	Participants' responses	%
1	Feedback from stakeholders	14	25.93%
2	Evaluation of performance indicators	12	22.22%
3	Comparing past with current performance	11	20.37%
4	Evaluation of business sustainability	9	16.67%
5	Achievement of objectives	8	14.81%
Total		54	100

As illustrated in Table 2, five main methods of evaluating the use of data to see whether it produced the expected results were revealed by participants. The most commonly used methods are using feedback from stakeholders, evaluation of performance indicators and comparing past with present performance (see Table 2). However, evaluation of business sustainability and achievement of objectives

was also mentioned, but used to a lesser extent. These findings concur with the findings by Tandon (2021) that the impact of CI programs/tools must be evaluated in order to understand the impact of these programs or tools to the business.

4.3.4 Knowledge obtained about competitors

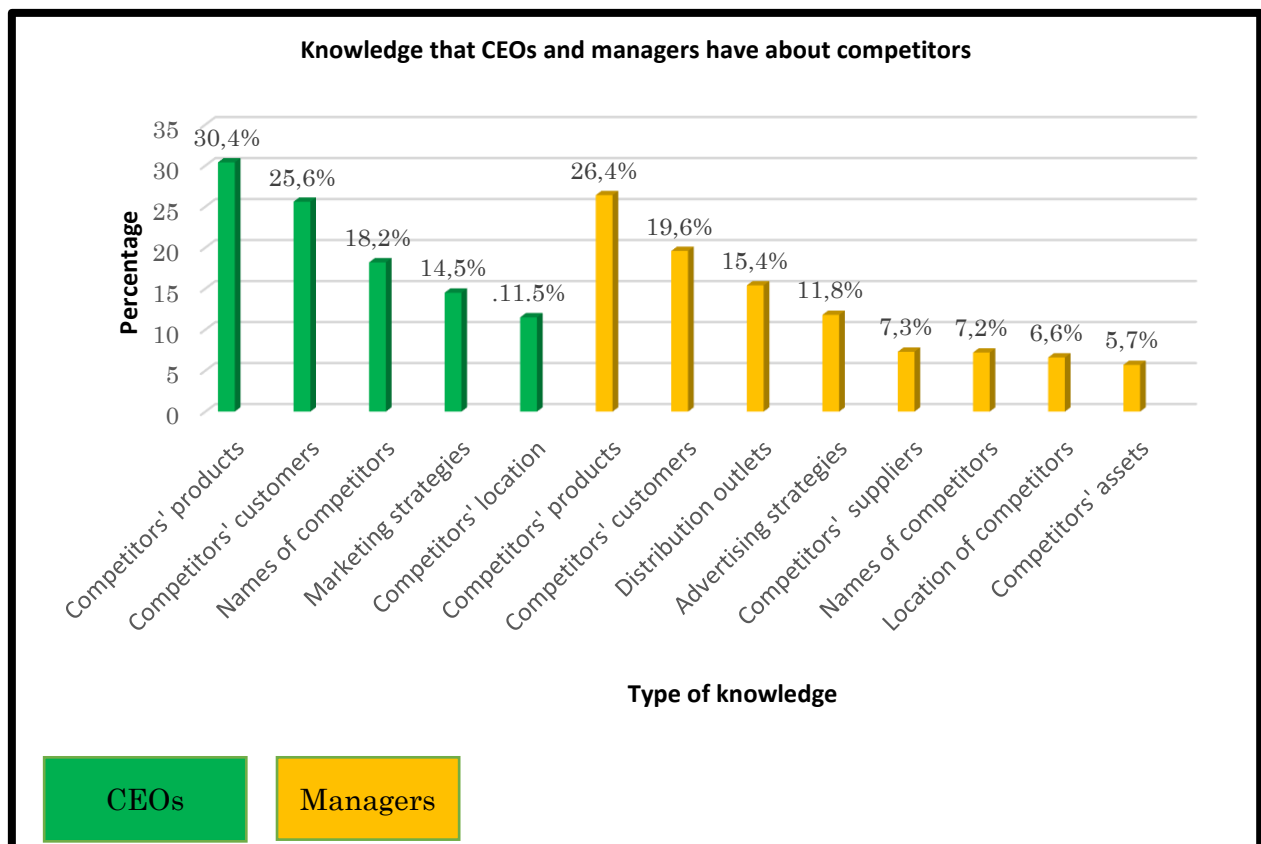


Figure 12. Knowledge that CEOs and managers have about competitors

Figure 12 illustrates the knowledge that CEOs and managers have about their competitors. Responses from both CEOs and managers showed that they value most the knowledge about competitors' products, their customers, names of competitors, marketing strategies, distribution outlets and advertising strategies. These results align with the study outcome by Kotler & Armstrong (2018) that having correct and current knowledge about market conditions such as competitors' products, competitors' customers and strategies is essential for developing competitive strategies. Department of Agriculture, Forestry and Fisheries (DAFF) (2020) alluded that agro-

processors must monitor the agro-processing industry in order to develop appropriate strategies and remain competitive.

4.4 Strategies and decision-making processes of the agro-processors

4.4.1 Strategies implemented by agro-processors to prevent the negative impact of competition

The objective of this section is to disclose the strategies used by agro-processing companies to overcome the negative impact of competition, maximise output and maintain their competitiveness in the current changing market conditions.

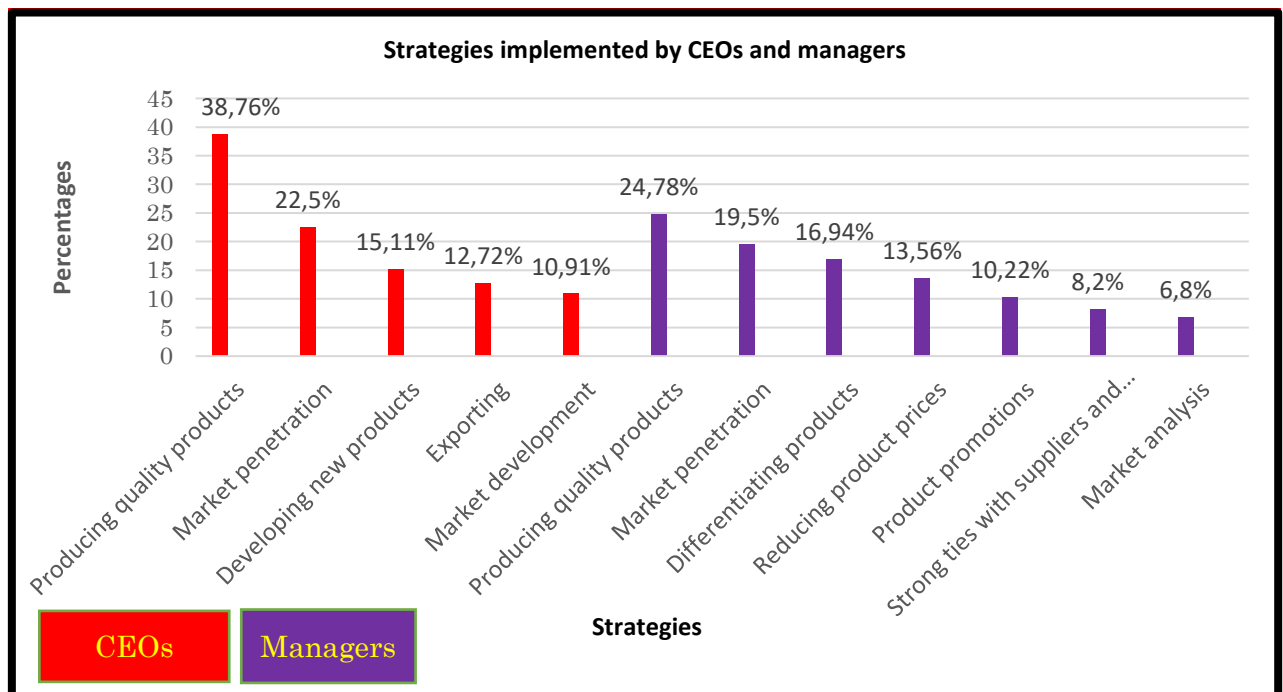


Figure 13. Strategies implemented by agro-processors to prevent the negative impact of competition

Pertaining to strategies that prevent negative impact of competition, participants identified ten main strategies. Data displayed in Figure 13 sheds insight on the usage rate with which agro-processors employ different strategies to mitigate the adverse effects of competition. Further examination of data shows that both CEOs and managers consider producing quality products and market penetration as most important strategies for reducing the negative impact of competition.

4.4.2 Improving strategising and decision-making for growth of the agro-processors in Limpopo Province

To improve strategising and decision-making, participants mentioned the following strategies they use in their organisations: effective planning, joint decision-making, monitoring and evaluating performance, defining clear goals and objectives, detailed data gathering and analysis, developing a culture of continuous improvement, flexible decision-making

process and risk evaluation and management.

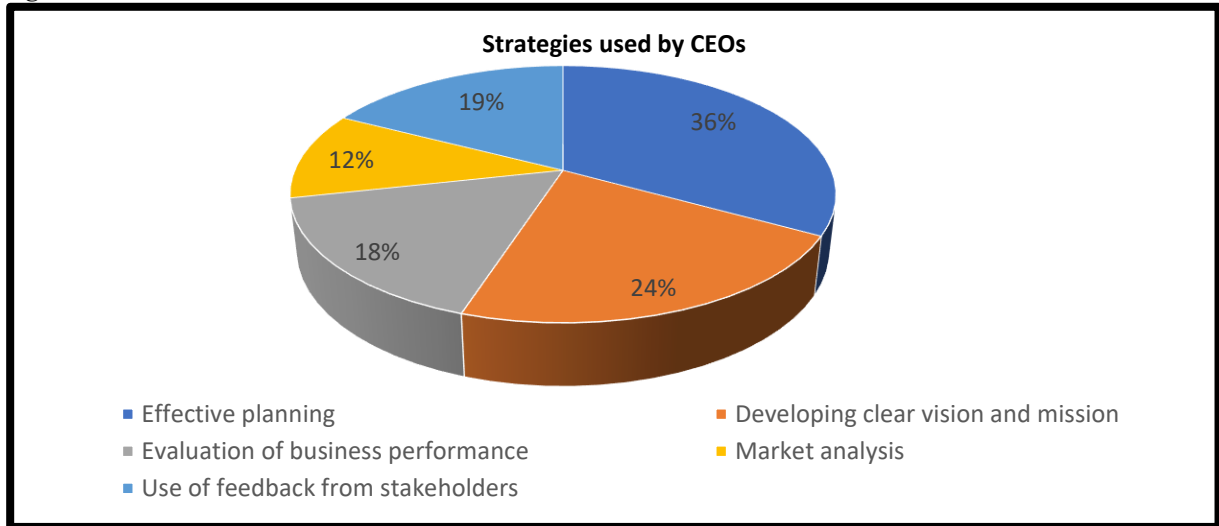


Figure 14. Strategies used by CEOs to improve strategising and decision-making

According to Figure 14, CEOs frequently use the following strategies to improve strategising and decision-making: effective planning and developing clear vision and mission of their businesses. Similar results were obtained by Crayon's 2020 study, which

highlighted that management must have knowledge about how to continuously improve decision-making and develop competitive strategies so that their businesses can gain a competitive advantage.

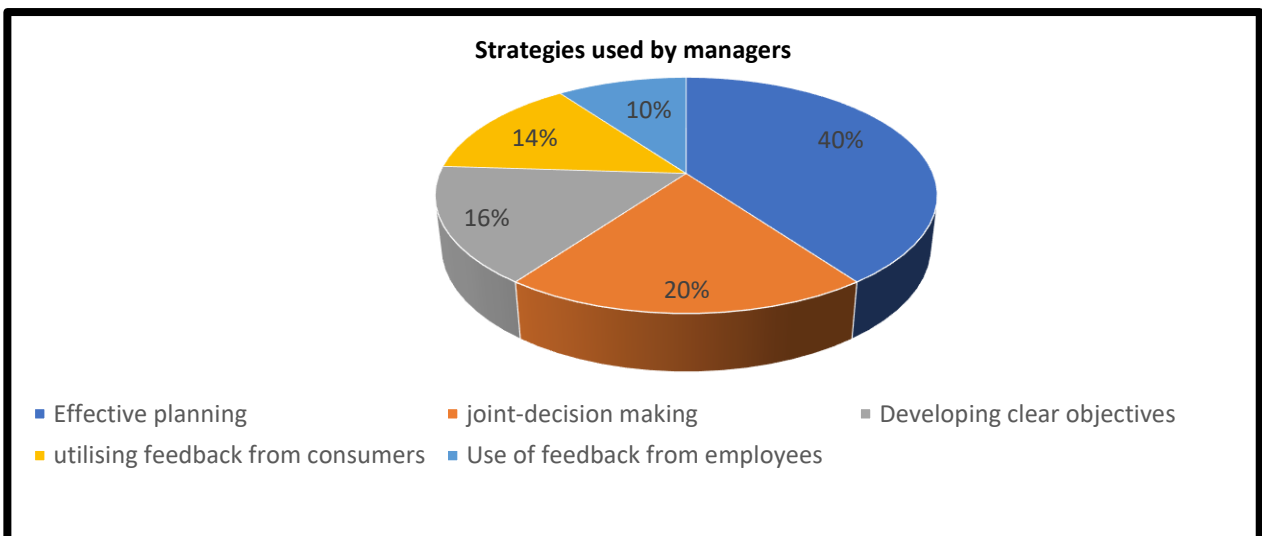


Figure 15. Strategies used by managers

Figure 15 shows the strategies used by managers and their proportional weight of usage. In this regard effective planning and joint decision-making are the most commonly utilised approaches. Overall, both CEOs and managers showed that effective planning is important in improving strategizing and decision-making. Planning,

according to Surico (2020), is a crucial part of decision-making because it offers an organised method for establishing goals and objectives.

5 DISCUSSIONS

Eight agro-processing subsectors participated in this study, and they have

operational history of 13 to 130 years and this indicates that are able to sustain their existence in the market over a period of time possibly by implementing competitive intelligence practices in order to stay informed about competitor activities and not realizing this. In terms of the number of employees, the minimum number of permanent staff is 30 and maximum of 135, whereas the minimum of seasonal staff is 10 and maximum of 25.

Few agro-processors do not have a formal department responsible for collecting information about competitors and the business environment, whereas the majority have a formal department that collects information about competitor activities and the business environment. These departments are Marketing Department, Sales Department, Research and Development (R&D) Department, Production Department and Advertising Department. These findings align with study results by Kuhn, et al. (2020) who confirmed that in South African companies, CI activities are performed in departments or units that use different names such as market insight or business intelligence instead of traditional known term, competitive intelligence. The presence of departments that collect information about competitors and the business environment is a sign that that they use some CI practices without realising it.

With regard to sources of information consulted by CEOs and managers to obtain information about competitors and the business environment, eight sources were revealed. However, the most commonly, consulted sources are websites of competitors, competitors' customers, suppliers and social media. Overall, these findings showed that the sources consulted by both CEOs and managers are used to understand the competitive business environment. Knowledge of information sources is the cornerstone for agro-processors' ability to adapt and execute their CI practices through the acquisition of insights from a range of sources in order to make well-informed decisions.

Diverse methods of analysing data were identified. Agro-processors analyse data in order to be able to react quickly to changes occurring in the business environment,

encourage decision-making based on facts and enable easy strategic planning. Pertaining to the types of data collected about competitors and the business environment, participants stated that they place high value on knowing competitors' products, customers, foreign markets, financial data and sources of funds for their businesses. The second most important type of data collected was economic factors, modern technology in use, competitors' market share and competitors' marketing strategies.

Participants indicated that data collected about competitors and the business environment is used to influence strategic choices. In this regard, competitive intelligence acts as a cornerstone for agro-processors to stay competitive and responsive to the turbulent business environment. The four prominent used of data gathered are understanding competitor activities, strategic planning and development, supporting innovation and product advancement. Additionally, intelligence gained is used to boost productivity, improve marketing tactics and risk management. This information is relevant as it assists to achieve competitive intelligence's goals, which are to give companies the knowledge and understanding they need for making fact-based decisions and obtain a competitive edge. Therefore, the capacity to utilise knowledge regarding competitors and the business environment remains crucial for agro-processors.

Pertaining to the methods used by CEOs and managers to evaluate the use of data to see whether it produced the expected results, participants showed that they use many approaches. These methods include feedback from stakeholders, evaluating performance indicators, comparing past with current performance, assessing long-term sustainability and checking if objectives are achieved. In this regard, agro-processors, this data highlights the value of examining data and checking if the use of intelligence has brought positive results to their businesses. With reference to the knowledge that CEOs and managers have about competitors, participants mentioned aspects of CI namely competitors' customers, names of competitors, marketing strategies,

location, products, distribution outlets, advertising strategies, suppliers and assets. The majority of agro-processors indicated that their employees have full knowledge of their competitors and this knowledge is the base for building CI. They mentioned the aspects of CI namely competitors' customers, names of competitors, marketing strategies, location, products, distribution outlets, advertising strategies, suppliers and assets. This knowledge assists agro-processors to develop competitive strategies. Agro-processors use various strategies to improve strategising and decision-making and they benefit from applying these strategies. In this regard, agro-processors are using CI to improve their overall strategic planning and decision-making abilities.

6. CONCLUSION

The study was conducted in Limpopo Province and it provided insight into the competitive intelligence (CI) practices used by the agro-processing sector. The research offered significant insights from participants, principally Chief Executive Officers and managers, and provided a thorough industry overview covering eight major agro-processing subsectors. A notable finding was the lack of dedicated CI departments, with data collection duties being split up among several already-existing departments like marketing, sales, research and development, production, and advertising. This absence raises concerns about how well agro-processors understand the advantages of specialized CI roles. The study highlighted the industry's adaptation techniques, placing particular attention on customer-focused approaches and highlighting the significance of recognizing both changing consumer wants and market trends.

Access to reliable competitor and business environment information was deemed crucial, benefiting decision-making, operational improvements, and agile responses to market dynamics. Data analysis methods such as comparative analysis, market share analysis, financial analysis, pricing analysis and analysis of customer feedback played a pivotal role in understanding rival strategies. Participants stressed the significance of CI for strategic planning, risk management, marketing

strategies, and enhancing productivity. Participants highlighted that staff's extensive knowledge of competitors forms the foundation for CI, aiding in the gathering and analysis of competitor data to maintain or establish a competitive edge. Agro-processing companies adopted a variety of strategies to improving strategising and decision-making order to improve the growth of their organisations. These are effective planning, joint decision-making, monitoring and evaluating performance, defining clear goals and objectives, detailed data gathering and analysis, developing a culture of continuous improvement, flexible decision-making process and risk evaluation and management.

7. LIMITATIONS OF THE STUDY

This study is only representative of the agro-processors in Limpopo Province, so the research findings may not be applicable in other provinces and nations. Furthermore, this study has not considered the small, private or family owned agro-processors operating in the province that are not registered with the Department of Agriculture and Rural Development and these agro-processors can also benefit from this study.

8. BENEFITS OF THE STUDY

The benefits of conducting this research is that the current knowledge gained about the agro-processors could assist them implement CI in a formal manner in future and they will be able to gather information about competitors and the business environment more effectively. Agro-processors could competitively add value to their products instead of selling low-priced unprocessed products. In addition, agro-processing firms in the province could increase local economic development and competitiveness. Furthermore, the findings of this study can be used to provide information to the Department of Agriculture and Rural Development, financial institutions, government agencies such as Limpopo Economic Development Agency (LEDA), Limpopo Agro-Food Technology Station (LATS), research institutions and industry associations about the agro-processors that are performing well and those that needs assistance so that they can grow. Assistance

could be in the form of developing policies that support the growth of agro-processors, offering financial assistance, improve agro-processing infrastructure, offering customised training programs and consulting services that assist agro-processors to develop products that comply with the demands of both domestic and foreign markets. Lastly, the research results may help the Department of Trade and Industry to understand the variety of products produced by agro-processors, which will facilitate their entry into foreign markets.

9. FUTURE STUDIES

Future studies should focus on examining the ways in which small and medium-sized, private family owned agro-processors might use competitive intelligence to promote their expansion into bigger enterprises or to develop partnerships with other agro-processors to improve their growth. Furthermore, future research initiatives should focus on the exploration of the use of modern technology by agro-processors to innovate in their product offerings and grow their businesses. Lastly, future research is required to explore how to improve conducting of CI activities through implementing training and development programs on staff members involved in competitive intelligence activities in an informal manner such as CEO's and Managers.

10. RECOMMENDATIONS

In the next stage of this study, the researchers will design a CI framework in order to assist this industry on how to use CI in a structured manner. The main objective of the proposed framework is to provide management, employees and other stakeholders with the knowledge and skills needed to overcome obstacles, seize opportunities and make wise decisions that will enhance the growth of agro-processing industry in Limpopo Province. This framework will be implemented in steps namely: defining the objectives of CI programs, planning for data collection, data collection, data analysis, reporting and knowledge sharing. Management will also solicit feedback from stakeholders. The knowledge generated will assist to develop

appropriate strategies and make good decisions that could assist to enhance competitiveness and growth of agro-processors.

11. ACKNOWLEDGEMENT

I would like to express my gratitude to University of South Africa for financing my studies through bursary funds; which has allowed me to continue my research. This bursary funds decreased my financial burden and enabled me to concentrate on my studies.

REFERENCES

- Acharya, A., Singh, S. K., Pereira, V., & Singh, P. 2018. Big Data, knowledge co-creation and decision-making in fashion industry. *International Journal of Information Management* 42 (12): 90–101. <http://dx.doi.org/10.1016/j.ijinfomgt.2018.06.008>.
- African Development Bank. 2018. *Agro-industry development*. Retrieved from: <https://www.afdb.org/en/topics-and-sectors/sectors/agriculture-agro-industries/agro-industry-development> [Google Scholar] [Accessed on 7 December 2020].
- African Development Bank (AFDB). 2019. *African Economic Outlook 2019*. Abidjan: African Development Bank Group. Retrieved from: <https://www.afdb.org/en/news-and-events/african-economic-outlook-2019-africa-growth-prospects-remain-steady-industry-should-lead-growth-18925> [Accessed on 23/06/2021].
- Ahmed, R. R., Ahmad, N., Khoso, I., A. Arif, K. A., and Palwishah, R.I. 2014. Competitive intelligence and marketing effectiveness of organizations: an investigation from Pakistan. *Middle East Journal of Scientific Research* 22 (10): 1565-1570. DOI: 10.5829/idosi.mejsr.2014.22.10.21495.
- Amarouche, K, Benbrahim, H and Abironi, I. K. 2015. Product opinion mining for competitive intelligence. *Advanced wireless, information, and communication technologies (AWICT 2015)*. *Peer-review under responsibility of organizing committee of the International*

- Conference on Advanced Wireless, Information, and Communication Technologies (AWICT 2015)* Doi: 10.1016/j.procs.2015.12.004. Available online at: www.sciencedirect.com. [Accessed on 23/04/2020].
- Amiri, N. S., Shirkavand, S., Chalak, M & Rezaeei, N. 2017. Competitive intelligence and developing sustainable competitive advantage. *Journal of Economic Literature*. No. 30, pp 173-194. DOI: 10.17230/ad-minister.30.9 www.eafit.edu.co/ad-minister
- Arrigo, E. (2016). Deriving competitive intelligence from social media. *International Journal of Online Marketing* 6 (2): 49–61. DOI: 10.4018/IJOM.2016040104.
- Asghari, S., Targholi, S., Kazemi, A., Shahriyari, S. and Rajabion, L. (2020). A new conceptual framework for identifying the factors influencing the effectiveness of competitive intelligence: competitive review. *An International Business Journal incorporating Journal of Global Competitiveness*. Vol.30 (5): 555-557. DOI: 10.1108/CR-05-2019-0054
- Balkrishna, A. (Ed.). 2021. *Sustainable Agriculture for Food Security: A Global Perspective*. 1st Edition. Apple Academic Press. <https://doi.org/10.1201/9781003242543>.
- Bisson, C. 2017. *Competitive Intelligence Literature Review. A new life and project for 2014-2019*. Stratbrain. European Union. Retrieved from: <https://www.sepa.org.uk/media/413272/1-sw-b3-competitive-intelligence-literature-review.pdf>. [Accessed on: 06/10/2021].
- Bloomenthal, A. 2022. *Competitive intelligence: definition, types, and uses*. Retrieved from: <https://www.investopedia.com/terms/c/competitive-intelligence.asp>. [Accessed 3 September 2023].
- Brown, J. 2019. *IMF: Poor education hinders SA's economic growth*. Retrieved from: <https://citypress.news24.com/Business/imf-poor-education-hinders-sas-economic-growth-20190312>. [Accessed on 7 December 2020].
- Bureau for Food and Agricultural Policy (BFAP) Baseline. 2020. *Baseline agricultural outlook 2020 – 2029*. Retrieved from: <https://www.bfap.co.za/wp-content/uploads/2020/08/BFAP-Baseline-2020-Final-for-web-1.pdf> [Accessed on 29/06/2021].
- Calof J. 2020. Competitive intelligence through the eyes of the professionals. *Foresight and STI Governance* 14 (3): 6–13. DOI: 10.17323/2500-2597.2020.3.6.13.
- Chauhan, B. 2020. How to use competitive intelligence to beat the competition. Retrieved from: <https://www.blog.datahut.co/post/competitive-intelligence-to-beat-the-competition>. [Accessed on: 05/10/2021].
- Chitonge, H. 2021. *The Agro-processing Sector in the South African Economy: Creating Opportunities for Inclusive Growth*. PRISM Working Paper 2021-4. Cape Town: Policy Research on International Services and Manufacturing, University of Cape Town. Retrieved from: https://commerce.uct.ac.za/sites/default/files/content_migration/commerce_uct_a_c_za/869/files/PRISM%2520Working%2520Paper%25202021-4%2520-%2520Chitonge.pdf. [Accessed on 17 October 2023].
- Cooper, D. R., & Schindler, P. S. 2014. *Business research methods*. 12th ed. McGraw-Hill. New York.
- Crayon. 2020. *State of competitive Intelligence. The latest best practices, trends, & results in the market & competitive intelligence field*. Retrieved from: <https://www.crayon.co/hubfs/Ebooks/2020-State-of-CI-Report-Crayon.pdf?hsCtaTracking=7c771509-c17e-4ec0-a244-3f4f19f16969%7C33efc45c-7d4e-40bd-9c9c-0b5542cc4eee> [Accessed on: 28/07/2021].
- Department of Agriculture and Rural Development (DARD). 2022. *Annual performance plan 2023/2024*. Retrieved from: <https://www.ldard.gov.za/images/documents/Annual%20Performance%20Plan/APP%202023-24.pdf> [Accessed on 26 September 2023].

- Department of Agriculture and Rural Development. 2018. *Readiness for 2018/19 planting season: portfolio committee meeting on Agriculture, Forestry and Fisheries*. Limpopo. Retrieved from: <https://pmg.org.za/committee-meeting/26924/> [Accessed on 12/04/2020].
- Department of Agriculture, Forestry and Fisheries. DAFF. 2020. *Annual performance plan for the year 2019/2020 fiscal year*. Retrieved from: https://static.pmg.org.za/DAFF_APP_2019_2020_WEB.pdf. [Accessed on 02/09/2021].
- Department of Agriculture, Land Reform and Rural Development (DALRRD). 2021. *Equitable access to land, integrated rural development, sustainable agriculture and food security for all*. Retrieved from: <https://www.dalrrd.gov.za/Branches/Economic-Development-Trade-Marketing/Agro-processing-support>. [Accessed on 28/05/2021].
- Diyaolu, A. K. 2019. The role of competitive intelligence in provision of quality information services. *Library Philosophy and Practices (e-journal)* 4: 1-9. <https://digitalcommons.unl.edu/libphilprac/2480> [Accessed on 22/09/2021].
- Dou H., Clerc P., Juillet A. 2020. Changing Priorities for Strategic Planning from National to Territorial Levels. *Foresight and STI Governance*. Vol. 14(3), pp. 88–99. DOI: 10.17323/2500-2597.2020.3.88.99.
- Du Toit, A.S.A. 2013. Comparative study of competitive intelligence practices between two retail banks in Brazil and South Africa. *Journal of Intelligence Studies in Business* 2: 37-52.
- FAO (Food and Agricultural Organization). 2020. The state of food and agriculture: overcoming water challenges in agriculture. Retrieved from: <https://www.fao.org/3/cb1447en/cb1447en.pdf> [Accessed on 28 September 2023].
- FAO. 2021. *Seizing the opportunities of the African Continental Free Trade Area for the economic empowerment of women in agriculture: Accra*. Retrieved from: <https://www.fao.org/3/cb6966en/cb6966en.pdf> [Accessed on 22 November 2023].
- Fatti, A. and du Toit, A.S.A. (2013). Competitive intelligence in the South African pharmaceutical industry. *Journal of Intelligence Studies in Business* 1: 5-14.
- Fatoki, O. 2014. The Competitive intelligence activity of immigrant entrepreneurs in South Africa. *Journal of Social Sciences*. Vol. 38(1): 1-8.
- Fleisher, C. D and Bensoussen, B.E. (2015). *Business and competitive analysis: effective application of new and classic methods*. 2nd edition. Pearson Education Inc. Upper Saddle River, New Jersey.
- Foropon, C. and Ranjan, J. 2021. Big Data Analytics in Building the Competitive Intelligence of Organizations. *International Journal of Information Management* 56: 1-13. <https://doi.org/10.1016/j.ijinfomgt.2020.102231>.
- Fukase, E, and W. Martin. 2018. *Agro-processing and horticultural exports from Africa*.90–113. In R.S. Newfarmer, J. Page, and F. Tarp (eds), *Industries without smokestacks: Industrialisation in Africa reconsidered*. Oxford: Oxford University Press.
- Global Africa Network. 2020. *A 2020 vision of the agricultural sector in Limpopo*. Retrieved from: <https://www.globalafricanetwork.com/company-news/a-2020-vision-of-the-agricultural-sector-in-limpopo/> [Accessed on 29/06/2021].
- Gracanin, S., Kalac, E. and Jovanovic, D. 2015. Competitive intelligence: importance and application in practice”, Review of Innovation and Competitiveness: *A Journal of Economic and Social Research* 1 (1): 25-44.
- International Trade Administration Commission of South Africa. 2016. *Agro-processing markets and related trade trends: Opportunities and challenges for South Africa*. Retrieved from: <http://www.itac.org.za/upload/Agroprocessing%20Markets%20and%20Related%20Trade%20Trends%20Opportunities%20and%20Challenges%20for%20South%20Africa.pdf> [Google Scholar] [Accessed on 7 December 2020].

- Ivanov, T. V. 2017. Competitive intelligence and counterintelligence – modern tools for generating proactive corporate security. *International Scientific Journal "Security and Future"* 1 (1): 7-10.
- Izquierdo, H., Fernández-Fernández, José-Luis & Balleste, E. (2017). Audit of a competitive intelligence unit. *The International Journal of Intelligence, Security, and Public Affairs*. 19(3). 214-241. DOI: 10.1080/23800992.2017.1384679.
- Jafar, M. 2021. The impact of competitive intelligence (CI) management on the competitiveness and performance management in Indonesia. *Journal of Social Science Advanced Research* 1 (2): 138-159.
- Kotler, P and Armstrong, G. 2018. *Principle of Marketing: Global Perspectives*. 7th Edition. Pearson Higher Education. United Kingdom.
- Louw, L. and Venter. P. 2017. *Strategic management: developing sustainability in Southern Africa*. 3rd edition. Oxford University Press. South Africa.
- Manasoe, B., Mmbengwa, V.M. and Lekunze, J.N. 2023. Entrepreneurship and Economic Empowerment of Small-scale Agro-processors in South Africa: Implications for Small Business Development and Entrepreneurship Research. *An Overview on Business, Management and Economics Research*. Vol. 2 (8): 99-137. DOI: 10.9734/bpi/aobmer/v2/5777B
- Manullang, S.M. 2019. *The development of SMEs in Bukit Barisan High Land Area to create an agricultural center by using a solid cooperation between local governments, enterprises, and farmers: an application of competitive intelligence for stimulating the growth*. Economics and Finance. Université Paris-Est. Available at: [NNT: 2008PEST0246](https://nntp.paris.fr/NNT:2008PEST0246). [Accessed on: 21/05/2021].
- Maponya, P. 2021. *An Assessment of Smallholder Farmer's Status in the Capricorn District in Limpopo Province, South Africa*. Agricultural Research Council DOI:10.21203/rs.3.rs-231248/v1 Retrieved from: https://www.researchgate.net/publication/349447764_An_Assessment_of_Smallholder_Farmer's_Status_in_the_Capricorn_District_in_Limpopo_Province_South_Africa. [Accessed on 18/08/2021].
- Maponya, P.I. and Mpandeli, S.N. 2016. Drought and food scarcity in Limpopo Province, South Africa. *2nd World Irrigation Forum 6-8 November 2016*, Chiang Mai, Thailand. Available on: <https://www.researchgate.net/publication/302974566>. [Accessed on 22/04/2020].
- Mathabatha, S.C. 2020. *State of the province address delivered by the Premier of Limpopo Province: The sixth Limpopo Provincial Legislature*. Polokwane. Retrieved from: <http://www.ldot.gov.za/wp-content/uploads/2020/03/Limpopo-State-of-the-Province-Address-2020.pdf>. [Accessed on 30/06/2021].
- Matlala, S. J. 2022. *Developing an investor aftercare model for promotion of the agro-processing sector: The case of Limpopo Province*. A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Leadership Studies. Retrieved from: https://ukzn-dspace.ukzn.ac.za/bitstream/handle/10413/21338/Matlala_Sepele_Johannes_2022.pdf?sequence=1&isAllowed=y. [Accessed on 26 September 2023].
- Myers, M. D. 2019. *Qualitative research in business and management*. Sage Publications Limited.
- Mlambo, C., Mukarumbwa, P. and Megbowon, E. 2019. An investigation of the contribution of processed and unprocessed agricultural exports to economic growth in South Africa. *Cogent Economics and Finance* 7 (1): 14-20. DOI: [10.1080/23322039.2019.1694234](https://doi.org/10.1080/23322039.2019.1694234).
- Mmbengwa, V.M., Ramabu, K., Rakuambo, J., Tembisa, N. and Qin, X. 2019. Participation of smallholder farmers in agro-processing industries: implications for the extension services of Gauteng. *South African Journal of Agricultural Extension* 47 (4): 106-119. Available at: <http://dx.doi.org/10.17159/2413-3221/2019/v47n4a530>.
- Mmbengwa VM, Rambau K, Qin X. 2020. Key factors for the improvement of smallholder farmers' participation in agro-processing industries of Gauteng

- province of the Republic of South Africa: lessons for the extension advisory services. *South African Journal of Agricultural Extension*. Vol. 48(2):153-165.
- Mulangu, F. 2015. 'Agro-processing in Africa: The low-hanging fruits', *Africa up close*. Retrieved from: <https://africaupclose.wilsoncenter.org/agroprocessing-in-africa-the-low-hanging-fruits/>. [Accessed on 10/17/2021].
- Mwadzingeni, L., Mugandani, R., & Mafongoya, P. 2020. Localized institutional actors and smallholder irrigation scheme performance in Limpopo province of South Africa. *Agriculture* 10 (9): 418. <https://doi.org/10.3390/agriculture10090418>.
- Mwale, M., Ndlovu, W. and Zuvarimwe, J. 2021. Challenges and Critical Success Factors for Rural Agrarian Reforms in Limpopo Province, South Africa. *Agraris Journal of Agribusiness and Rural Development Research* 7(2): 191-206. DOI: 10.18196/agraris.v7i2.11272.
- Myburgh, W. and Zitha, R. 2020. *Impact study on tourism and food security for Musina-Makhado SEZ*. First Draft Report-2020. Urban-Econ Development Economists Pty (Ltd) and Musina Makhado Special Economic Zone. Retrieved from: https://sahris.sahra.org.za/sites/default/files/additionaldocs/AppX_2_Tourism_Food_MMSEZ-First-Draft-Reportv2-EIA-Submission-Appendix-x.pdf. [Accessed on 28/06/2021].
- Nenzhelele, T.E., 2016, 'Competitive intelligence practice in the South African property sector', *South African Journal of Information Management* 18(2), a711. <http://dx.doi.org/10.4102/sajim.v18i2.711>
- Owoo, N.S. and Lambon-Quayefio, M.P. 2017. *The agro-processing industry and its potential for structural transformation of the Ghanaian economy*. WIDER Working Paper 2017/9. United Nations University World Institute for Development Economics Research. Available on: wider.unu.edu [Accessed on 26 November 2020].
- Paap, J. 2020. Mapping the technological landscape to accelerate innovation. *Foresight and STI Governance* 14 (3), pp. 41-54. DOI. 10.1723/2500-2597.2020.3.41.54.
- Reena, R. D. 2021. *Inclusive industrialisation in agro-processing: challenges faced by small and medium-sized dairy processors in South Africa*. Working Paper V1. Retrieved from: https://iiap.info/wp-content/uploads/2021/10/IIAP_South-Africa-Dairy-Working-Paper_October-2021.pdf. [Accessed on 26 September 2021].
- Saunders, M. N. K., Lewis, P and Thornhill, A. 2019. *Research methods for business*. 8th edition. Pearson Publishers. United Kingdom.
- Sewdass, N and Du Toit, A. S. A. 2015. Competitive intelligence in emerging economies: a comparative study between Brazil and South Africa. *The Journal for Transdisciplinary Research in Southern Africa* 11(1), pp. 113-132.
- Singh, S, Sagar, R. A. 2021. Critical look at online survey or questionnaire-based research studies during COVID-19. *Asian Journal of Psychiatry* 65 (5):1-4. Doi: 10.1016/j.ajp.2021.102850.
- Stefanikova, L. and Masarova, G. 2014. The need of complex competitive intelligence. *Procedia - Social and Behavioural Sciences* 110 (10): 669 – 677. DOI: 10.1016/j.sbspro.2013.12.911.
- Strategic Consortium of Intelligence Professionals (SCIP). 2023. *What is competitive intelligence?* Retrieved from: <https://www.scip.org/page/CI-MI-Basics-Topic-Hub> [Accessed on 9 September 2023].
- Surico, K. 2020. How competitive intelligence reveals challenges and ways to overcome them: analysis, intelligence, market intelligence. Available at: <https://netbasequid.com> [Accessed on 12/05/2020].
- Tahmasebifard, H. and Wright, L. T. 2018. The role of competitive intelligence and its sub-types on achieving market performance, *Cogent Business & Management* 5 (1): 149-158. DOI: 10.1080/23311975.2018.1540073.
- Tandon, S. (2021). *Competitive intelligence analysis: An actionable guide on reports,*

reports and tools. Retrieved from:
<https://www.contify.com/resources/blog/competitive-intelligence-analysis/>
 [Accessed on 30/08/2021].

- Uzohue, C. E. and Yaya, J.A. 2016. The use of internet by information professionals: a competitive intelligence approach. *International Journal of Education and Information Technology*. Vol. 2, No. 4, 2016, pp. 19-27
<http://www.aiscience.org/journal/ijeit>
 ISSN: 2381-7410 (Print); ISSN: 2381-7429 (Online).
- Vanissa, V., Widarmanti, T. and Irawan, H. 2021. Exploring text analytics for social media competitive analysis: top brand internet service provider companies in Indonesia. *International Journal of Business and Technology Management* 3 (1): 40-47.
<http://myjms.mohe.gov.my/index.php/ijbtm>.
- Vistoroskyte, I. 2021. *Sources of Competitive Intelligence and Best Practices*. Retrieved from:
<https://oxylabs.io/blog/sources-of-competitive-intelligence>. [Accessed on: 24 March 2023].
- Waithaka, P. 2016. Competitive intelligence practices and performance of firms listed on the Nairobi Securities Exchange, Kenya. *European Scientific Journal* 12 (19): 107.
 URL:<http://dx.doi.org/10.19044/esj.2016.v12n19p10>.
- Yun, L. 2020. Situation description is an important part of competitive intelligence. *American Journal of Information Science and Technology* 4 (2): 25-29. DOI: 10.11648/j.ajist.20200402.11.