

AFRICA UNIVERSITY

(A United Methodist-Related Institution)

PERFORMANCE OF NEW PRODUCTS AT CAIRNS
FOODS LIMITED ZIMBABWE

BY

VIVINAH BEATRICE NAMATAI MATSWETU

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF EXECUTIVE
MASTER OF BUSINESS ADMINISTRATION IN THE COLLEGE OF
BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE

2019

Abstract

The purpose of the research was to examine the performance of new products at Cairns Foods Limited Zimbabwe. The aim of the research was to understand why Cairns Foods Limited new products seem to perform poorly after a short period of time in the market. Relevant literature was used to create a background to the study which included peer reviewed journals, books, papers, dissertations and empirical data sources. The research design followed a survey design approach with questionnaires as the main research instrument. The study population was 213 Cairns Foods Limited employees and customers and the sample had 120 participants drawn from the population. The population was portioned into sub-groups that represented Cairns Foods Limited employees as well customers. Each strata defined a partition of the population that were necessary to the completion of the research. After each stratum was defined simple random sampling was used in order to minimize sampling error. The employees were partitioned into the following strata: senior management, middle management, general employees including factory workers, salespersons and lastly Cairns Foods top retail customers. The objectives of the research were to assess the performance of new Cairns products on the market, explore the new product development process at Cairns Foods Zimbabwe, determine the process that is done before engaging in new product development, and to establish the availability of standard procedure manuals for new product development at Cairns Foods Limited Zimbabwe. Findings showed that 50% of Cairns Foods Limited products are performing either poorly or very poorly. This is a red flag for the organization as its core business is that of manufacturing fast moving consumer goods that sell at very reasonable prices meaning the organisation needs to push volume for it to realise good returns. Other issues to look at include the type of product, the market as well incorporating technological advancements. In regard to performance measurement profit tabulations are the most used performance indicator, as cited by about 84% of the respondents. The findings indicate that Cairns Foods Limited places more emphasis on the use of financial measures to measure the performance of its goods as compared to non-financial measures such as time to market. 60% of the participants agree that there are Standard Performance Measures in place for all new products at Cairns Foods Limited. However, 40% of the participants disagree that there are Standard Performance measures in place for all new products. This could show that the procedure or operating practice is not well-known by all employees. 50% of the participants noted that Standard Performance Measures in place products at Cairns Foods Limited form a Standard Operating Procedure for all new products. Recommendations for the organisation and the sector at large are included as part of the dissertation.

Key words: New product development, innovation, Research and Development

Declaration Page

I declare that this dissertation is my original work except where sources have been cited and acknowledged. The work has never been submitted, nor will it ever be submitted to another university for the award of a degree.

.....

Student's Full Name

Student's Signature (Date)

.....

Main Supervisor's Full Name

Main Supervisor's Signature (Date)

Copyright Page

No part of the dissertation/thesis may be reproduced, stored in any retrieval system, or transmitted in any form or by any means for scholarly purposes without prior written permission of the author or of Africa University on behalf of the author.

Acknowledgements

I would begin by sincerely thanking my supervisor; Dr. S. Murairwa for the unyielding support that he gave me throughout this process.

I would also like to thank my family and friends, particularly Mthelisi Ndlovu for being my number one supporter. Special thanks go to all questionnaire respondents for providing on time responses and to those not mentioned for their helping hand while preparing this dissertation. I also thank God mightily for his kindness and faithfulness.

Dedication

This dissertation is dedicated to my mother Theresa Chikore, without whose support I would not be here.

Definition of key terms

Process: A sequence of observable and unobservable individual and collective events, actions and activities, unfolding over time.

Product Development Process: A set of defined steps which describe the manner in which an organisation translates ideas into products or services that can be sold to the final consumer and benefits both the consumer as well as the organization.

Fast Moving Consumer Goods (FMCG): A low-priced item which is used rapidly with a single or limited number of consumptions (as opposed to consumer durable or consumer service).

Product innovation: The development and market introduction of a new, redesigned or substantially improved good or service. Examples of product innovation by a business might include a new product's invention; technical specification and quality improvements made to a product; or the inclusion of new components, materials or desirable functions of a product.

Product acceptance: The verification or acceptance that a manufactured item meets required specifications or standards and is usable for its purpose.

Product acceptance criteria: Customer acceptance is perilous to measure whether the product is acceptable to the customer. Acceptability is measured by looking at the customer's level of interest, preferences, and intention to purchase. It also imperative to determine the benefits, qualities, and structures of the product to which the customer responds. A product in this case must work the way it is said to work by the manufacturers. The product must excite and delight the customer for it to be deemed acceptable to the customer.

Consumer: A person or thing that consumes.

Table of contents

Abstract	ii
Declaration Page	iii
Copyright Page	iv
Acknowledgements	v
Dedication	vi
List of Tables	x
List of Figures	xi
List of Appendices	xii
CHAPTER 1 INTRODUCTION	1
1.1 Introduction.....	1
1.2 Background to the study	1
1.2.1 Cairns Foods Zimbabwe	3
1.3 Statement of the Problem	4
1.4 Research Objectives	5
1.5 Research Questions	6
1.6 Assumptions.....	6
1.7 Significance of the study.....	7
1.8 Delimitation of the Study	7
1.9 Limitations of the Study.....	8
1.10 Chapter Summary	9
CHAPTER 2 REVIEW OF RELATED LITERATURE	10
2.1 Introduction.....	10
2.2 Theoretical Framework	10
2.2.2 Definition of new product development performance	12
2.3 Criticism of use of Financial Measures only	19
2.4 New product development	20
2.4.1 Factors contributing to the failure of new products on the market	29
2.4.2 Conceptual Framework	36
2.5 Summary	36
CHAPTER 3 METHODOLOGY	38
3.1 Introduction.....	38
3.2 The Research Design	38
3.3 Population and Sampling	38
3.3.1 Sample size	39

3.3.2 Stratified Sampling	41
3.4 Data collection Instruments	41
3.4.1 Questionnaires.....	41
3.5 Data Collection Procedure	44
3.6 Analysis and Organisation of Data	45
3.7 Ethical consideration.....	45
3.9 Summary	46
CHAPTER 4 DATA PRESENTATION, ANALYSIS AND INTERPRETAION.....	47
4.1 Introduction.....	47
4.2 Data Presentation and Analysis	47
4.2.1 Questionnaire response rate	47
4.2.2 Interview response rate	48
4.2.3 Demographic data	48
4.3 Discussion and Interpretation	50
4.3.1: To assess the performance of new Cairns products on the market.	50
4.3.2: To explore the new product development process at Cairns Foods Zimbabwe.	56
4.3.3: To determine the process that is done before engaging in new product development. .	58
4.3.4: To establish the availability of standard procedures manuals for new product development at Cairns Foods.....	61
4.4 Summary	64
CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	65
5.1 Introduction.....	65
5.2 Discussion.....	65
5.3 Conclusions.....	67
5.4 Implications	70
5.5 Recommendations.....	70
5.6 Suggestions for further research	72
List of References:.....	73
APPENDIX 1: Consent Letter	78
APPENDIX 2: Consent Form	80
APPENDIX 3: Questionnaire Survey Instrument.....	81
APPENDIX 4: Corporate Approval Letter	86
APPENDIX 5: AUREC Approval Letter.....	88

List of Tables

Table 3.1: Research Population

Table 3.2: Research Sample

Table 4.1: Administration and response rate of questionnaires

Table 4.2: Distribution of respondents by Designation

Table 4.3: Distribution of respondents on how well new Cairns Foods products perform in terms of the below constructs.

Table 4.4: Distribution of respondents on how performance of new products is measured for Cairns Foods.

Table 4.5: Distribution of respondents on how research is carried out at Cairns Foods.

Table 4.6: Distribution of respondents on whether research is carried out before a product launch at Cairns Foods.

List of Figures

- Figure 1:** New projects performance at Cairns foods Zimbabwe from years 2014 to 2018 (SR,2018)
- Figure 2.1:** New development performance measures (Owee Kowang & Rasli, 2011)
- Figure 2.2:** New product development process (Trott, 2008)
- Figure 2.3:** Trade-offs in New Product Development (Hauser, 2007).
- Figure 2.4:** Product life Cycle Charles (2007).
- Figure 3.1:** Conceptual Framework
- Figure 4.1:** Distribution of respondents by Age
- Figure 4.2:** Distribution of respondents by Educational Qualification.
- Figure 4.4:** Distribution of respondents on performance of Cairn Foods products.
- Figure 4.5:** Distribution of respondents on whether they knew innovations employed by Cairn Foods.
- Figure 4.6:** Distribution of respondents on how different the Cairns Foods innovations are from those in the market.
- Figure 4.7:** Distribution of respondents on how innovative they perceive the Cairns Foods products to be.
- Figure 4.8:** Distribution of respondents on whether one is aware of the existence of a New Product Development process.
- Figure 4.9:** Distribution of respondents on whether carrying out research before launching a new product affects its success or failure.
- Figure 4.10:** Distribution of respondents on whether products are launched internally before to Cairns Foods employees before they are launched into the market.
- Figure 4.11:** Distribution of respondents on whether there is a standard lead time for a new product to be launched into the market.
- Figure 4.12:** Distribution of respondents on whether there are New Product Development Standard Operating Procedures at Cairns Foods.
- Figure 4.13:** Distribution of respondents on whether there are Standard Performance measures in place for all new products at Cairns Foods.
- Figure 4.14:** Distribution of respondents on whether these Standard Performance Measures form a Standard Operating Procedure for all New Products developed at Cairns Foods.

List of Appendices

APPENDIX 1: Consent Letter	78
APPENDIX 2: Consent Form	80
APPENDIX 3: Questionnaire Survey Instrument.....	81
APPENDIX 4: Corporate Approval Letter	86
APPENDIX 5: AUREC Approval Letter.....	88

CHAPTER 1 INTRODUCTION

1.1 Introduction

The ever-changing market opens an excess of opportunities for manufacturing companies in and around the world. As the needs and wants of consumers change constantly so does supply and demand. This study aims to assess the performance of new products and understand the process of new product development (innovations) at Cairns Foods. The study will focus on Cairns foods Zimbabwe. Product innovation is defined by Drucker (1984) as ‘the creation and subsequent introduction of a good or service that is either new, or an improved version of previous goods or services.

Eyal (2014) argues that industry competitors must be conscious of new consumers entering their market while commissioning organizational strategies that exploit the new entrants. A progressively growing market creates competitors seeking to make a competitive move through the positioning of new products. Introducing new products in the same segment with existing products is a method that will generate more sales uyyand bring profitability for any business in the Food Manufacturing and Goods Industry if done correctly. This chapter will highlight the problem being faced by Cairns Foods Zimbabwe once new products are launched and throughout their life cycle.

1.2 Background to the study

Manufacturing companies are failing to compete with other companies across the border due to developing new products that fail to make it in the market. According to Damiyano, Muchabaiwa, Mushanyuri and Chikomba, (2012), demand for locally produced goods has declined because of a probable shift in consumption patterns opting

for cheaper imported goods. According to Karim (2009), companies are under pressure to improve their operational efficiency to achieve heightened competitiveness and overall business performance. Such pressures according to Karim (2009) include competition from foreign products, new product introduction by competitors, rapid technological improvements, unanticipated consumer shifts and advances in manufacturing and information technology.

Damiyano (2012) argues that effective demand for local product in Zimbabwe has dropped due to it mostly being dated. There seems to be no deliberate, focused, appropriate plan of action towards addressing the crisis that is upon the economy. There also appears to be an uneven playing field for local businesses across the value chain. Zimbabwe's economy is in a crisis thereby most manufacturing companies have failed to weather the storm and have been forced to shut down. He further argues that another major effect of the economic crisis is the brain drain that the country is experiencing and as such the knowledge base of organizations then suffers. Also, because Zimbabwean companies are operating in a high cost environment research and development activities have been highly streamlined or cut off completely in favour of money generating activities only.

The deindustrialization of the Zimbabwean economy is leading to closures of companies that produce secondary goods. This is due to low priced imports some of which are subsidized. Local industry must compete with goods from countries with low cost bases. Zimbabwe is riddled with high costs of urban council charges, poor infrastructure, high cost of power leading to low capacity utilization and little to no product innovation (Damiyano, 2012).

1.2.1 Cairns Foods Zimbabwe

Cairns Holdings manufactures and distributes food, beverage and confectionery products. Major product lines include snacks (potato and maize based), groceries (cereals, peanut butter, and cooking aids), beverages (wines, spirits, and cordials), vegetables and fruit (baked beans, jams and fruits) and confectionery (biscuits, chocolates and sweets).

Cairns foods began as a company that distributed cars in 1920 and over the years became a manufacturer of Fast-moving consumer goods. In 1976 the acquisition of Willards Foods Limited and its subsidiaries marked entry into the Food industry. In 1977 Cairns acquired Universal Macaroni Factory (Private) Limited, the largest manufacturer of pasta and ice-cream in Zimbabwe at that time. The Universal Macaroni Factory was also the holding company of Monis Wineries (Private) Limited, a wine and spirits producer. In 1980, Cairns group retained the remaining 50% interest in Mateppe Estate (Private) Limited, which has since developed into one of the country's most prominent wineries, Mukuyu Winery.

In 1981, with a controlling interest of 80%, Ribbi (Private) Limited was bought and renamed Nyanga Trout (Private) Limited; expanding the product portfolio to include the breeding and rearing of trout fish. The following year (1982), Cairns purchased the business and assets of Cerebos Foods, a company engaged in tomato processing and canning in Mutare. In 1986 the group acquired 100% shares of Border Streams products. In 1994 the Mutare canning plant was moved to its present site. The group was under Judiciary management until 2016 where things began to pick up and the company could sustain operations on its own. Today the organization has amalgamated its group of companies into one company ran by Takura Holdings. All of the products

produced by the organization are produced in their manufacturing plants in either Mutare, Marondera and Harare.

Cairns Foods limited has four SBUs, namely Chips and snacks, Groceries, Vegetable and fruits, Beverages and Confectionery. The snacks and Groceries factories are both situated at the head office in Adberne industrial area in Harare. The Vegetable and Fruits SBU is in Mutare and the beverage SBU, Mukuyu Winery is in Marondera. These SBUs are grouped into three categories namely, Culinary, Snacks and treats and Hot and cold beverages. New product development is done per SBU therefore at any time of the year Cairns can have 3 or 4 products being released into the market.

1.3 Statement of the Problem

Performance of new Cairns Foods products has continuously slowed down after a few months in production leading up to a point where they do not remain in circulation much longer. Cairns Foods is embarking on new projects each year that may be produced for a short while then production is stopped. Product portfolio for the organization has 200 lines however of the 200 about 100 of these products are still being produced. In order to understand why the new products continuously perform in this manner it has become imperative to assess the performance of these products.

Cairns Foods operates in a very competitive environment where many other organisations local and international are players of. Customer satisfaction is a key component in the Fast-Moving Consumer Goods-industry and this may have an impact on the success or failure of new products and the organisation at large. The organisation has employed various methods to measure performance however these are more

financial and more vital information may be missed by just focusing on the singular measurement construct.

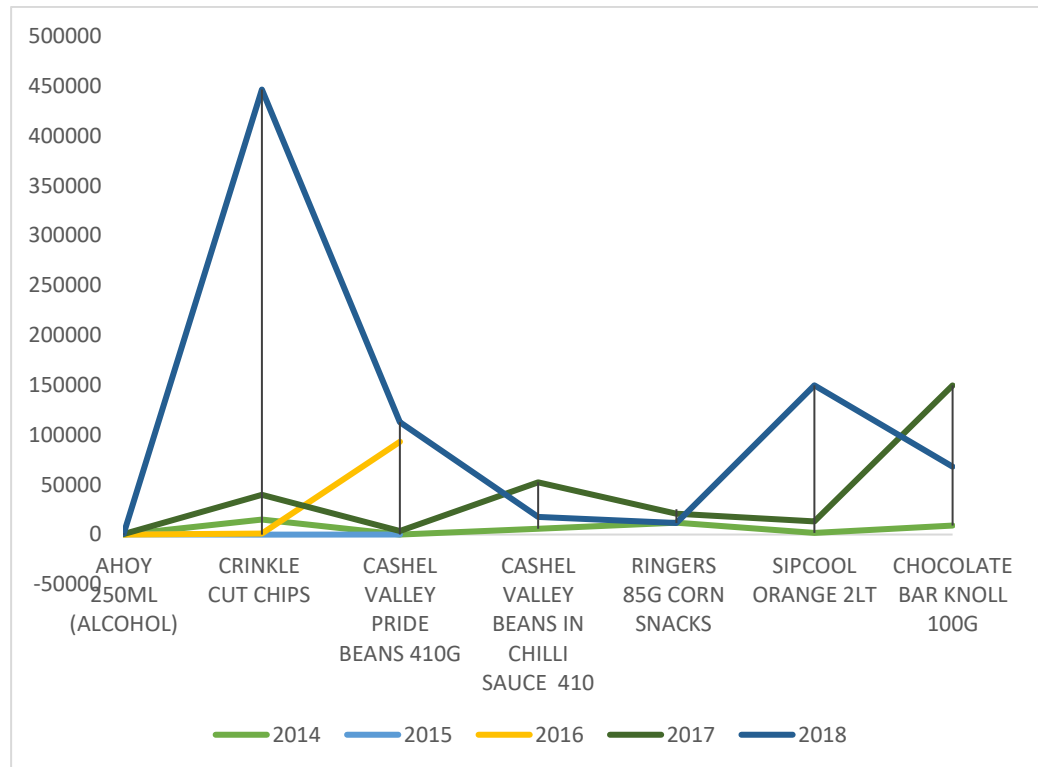


Figure 1: New projects performance at Cairns foods Zimbabwe from years 2014 to 2018 (SR,2018)

Performance is shown based on year of introduction and subsequent performance in the years after that. While the products may have been innovative and seem to have been produced by high quality raw materials their performance seems to lessen from year of inception. It is against this background that this study will be undertaken.

1.4 Research Objectives

The objectives of the research were to:

1.4.1 Assess the performance of new Cairns products on the market.

- 1.4.2** Determine the new product development process at Cairns Foods Zimbabwe.
- 1.4.3** Determine the process that is done before engaging in new product development.
- 1.4.4** Establish the availability of standard procedure manuals for new product development at Cairns Foods Zimbabwe.

1.5 Research Questions

- 1.5.1** How do new Cairns products perform on the market?
- 1.5.2** How is new product development process undertaken at Cairns Foods Zimbabwe?
- 1.5.3** Is research being undertaken done before engaging in new product development?
- 1.5.4** Does Cairns Foods have standard procedures manuals for new product development?

1.6 Assumptions

- All respondents concerned were co-operative and responded to the research questions honestly and sincerely so that information given can undoubtedly be used to depict the institution they represent.
- All responses provided by the interview and questionnaire sample population were accurate and reliable so that they can be used as a representative of the whole population.
- The researcher had access to the correct and up to date information from respondents and had sufficient resources to complete the study.

1.7 Significance of the study

The scope of the study was to gain an understanding of how manufacturing companies in Zimbabwe carry out the process of product innovation. Furthermore, it is of utmost importance to the researcher to evaluate the performance of new projects at Cairns Foods and how they contribute to the bottom line of the business. For Cairns Foods as a business this research is vital for understanding the critical characteristics of its target market to increase sales revenue, profit, Return on Investment and overall business success through new projects. This research is important to other researchers as it will aid to inform action, to prove a theory and to contribute to developing knowledge in this field of study. Research is a tool for building knowledge and for facilitating learning.

Market research enables companies to explore new and appropriate strategies for advertising and distributing their products or services. It also allows them to identify possible causes of poor sales, such as falling brand awareness among the public or competition from other brands. Research also puts knowledge in the hands of everyday citizens and will aid in the growth of this body of knowledge and to increase public awareness. The benefits of conducting this research includes increasing personal knowledge and contributing to humanity, as well as developing skills and interests for further research in the same field.

1.8 Delimitation of the Study

The study focuses on the performance of new products at Cairns Foods Zimbabwe and was conducted in Harare only. The study focuses on the food manufacturing sector only therefore cannot be used to represent any other sector. The variables of the study include

effectiveness of the product development process at Cairns Foods Zimbabwe, effects of performance of new products and the level of performance of new products.

1.9 Limitations of the Study

The researcher encountered a couple of challenges during the process of trying to put together the research. The challenges encountered are discussed henceforth.

- Some respondents felt that the information being sought was a bit sensitive hence some participants were not reluctant to express themselves and divulge information about the organisation. The researcher assured the respondents that proper ethical guidelines will be used, and all information gathered will be treated with privacy and confidentiality.
- Some respondents might not take the study seriously and therefore could have possibly give incorrect information. The researcher made follow ups to make sure that all questions are understood and were answered properly. In addition, the researcher also made sure that the participants are informed on the purpose and the significance of the study.
- It was possible that some respondents can exaggerate or give false and inadequate information. In order to obtain reliable information, the researcher tried to convince the participants that the information being sought is of great importance and will in the long run benefit them, their organisation, the manufacturing sector and the nation at large.
- In obtaining the information, the ideal situation was to interview every member of the target group and come up with a specific sample. However, this was not possible for the researcher because of the sheer size of the task, cost and time involved. As a result, the researcher used purposive and snowball sampling, and only used participants resident in Harare.

1.10 Chapter Summary

Chapter one focused on the background to the research, statement of the problem, research objectives, limitations and delimitations thereby forming the basis of the research. The significance of the research to various stakeholders is outlined in this chapter as well. The following chapter will look at literature that supports the topic under discussion.

CHAPTER 2 REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter explores the various literature on the importance of new products and how they are vital to the success and prosperity of an organization. With increasing development in technology, global competition, and changing and diverse market needs, Zimbabwean companies need to succeed at product innovation or risk failing as businesses. Therefore, an understanding of what makes new products successful what practices and characteristics differentiate the winners is important in order to provide the management insights needed in the decades ahead.

The literature review will explore the critical driving factors that motivate successful product developments in Zimbabwe particularly at Cairns Foods which is usually financial performance. Short-term profitability is usually a prime goal, however there are also other ways of measuring a new product's performance for example, time-to-market, or the product's overall impact on the company opening up a platform for growth.

2.2 Theoretical Framework

Hart (2010) states that as a key element in sustaining growth for any organization, the constant development and re-development of new products remains at the epitome of business survival. Studies have been carried out with a specific focus of identifying and describing factors which determine the outcome of new product developments which will be the critical success factors in the process of new product development. Hart (2010) adds that the focus therefore for research in this field has been the measurement of success itself however there appears to be very little agreement amongst these studies

as a variety of measures have been employed using data from different sources and either focusing on pre- launch as opposed to post-launch success. The theory guiding this research will be a hybrid of both pre-launch success measurement as well post-launch success measurement. This hybrid will show both financial and non-financial factors of new product performance assessment and the relationship that exists between these.

Hart (2010) distinguishes between financial and non-financial performance measures. Researchers such as Saunders and Wong (1985) identify financial measures as follows:

- Earnings
- Increase in sales
- Net Sales
- Investment performance
- Return on equity

Non-financial measures were outlined by Frazier and Howell (1983) as being the following:

- Capacity to Innovate
- Market position
- Ethical standing
- Employee working conditions and,
- Prospects for employment

However according to Hart (2010) while these are measures of performance, they relate more to corporate performance at a large scale and may not directly influence the success and failure of a new product.

2.2.2 Definition of new product development performance

Owee Kowang and Rasli (2011) define new product development performance as the market return for new products in terms of the products contributions made to a company's sales and profits. New product development performance can be also described as a measure of the time required to introduce a new product to the market, the level of product quality and the response from customers. According to Owee Kowang and Rasli (2011) examples of new product development performance measurements used by prior researcher to benchmark performance of organizations include:

- Revenues and profits gained by the business from new products.
- Success and failure rates of new products.
- On time and on budget.

2.2.3 New product development performance measures from a holistic viewpoint (Owee Kowang & Rasli ,2011)

The measurement constructs below will form the basis of this research and as such will constitute the theoretical framework. In addition to looking at critical success factors in terms of new product development Owee Kowang and Rasli (2011) argue that an ideal new product development process framework should be able to deal with two types of innovations that is incremental innovation and revolutionary innovation. Therefore, in-order to build up the organization capability to accommodate both incrementally and revolutionary innovation, in the formation of new product development process framework, organizations should focus on framework that promotes incremental innovation and at the same time maintain a systematic process structure.

Product Level Measure	Met Performance Specifications Met Quality Specifications
Customer Acceptance Measure	Customer Satisfaction Customer Acceptance Customer Competitive Advantage Number of Customers
Market Level Measure	Met Sales growth goals Met Revenue Goals Met Market Share goals Unit Volume goals
Financial Measure	Met Profitability goals Met Contribution goals Development cost Return of investment
Timing Measure	Launch on time Break-even time Time to market

Figure 2.1: New development performance measures (Owee Kowang & Rasli, 2011)

The study focused on ten different performance measures which included but not limited to:

- Percentage of sales by new products,
- Profitability and
- Success rate of that specific product.

Cooper (2007) states that the ten measures were reduced to two key performance dimensions which are profitability and impact, and these were used to define performance. Nine possible drivers of performance were identified. These included strategy, process, organizational design, and climate for innovation and four key drivers of performance were identified; namely, a high-quality new product development process that is whether there is one, what it contains and whether it is clearly communicated. According to Cooper (2007), this has been identified to have a substantial effect on performance. The new product strategy for the business unit, resource availability this relates to both people and money are strongly tied to new product performance as well as Research and Development spending levels. Cooper (2007) found that simply having a formal new product process had no impact on the success.

Cooper (2007) adds that there are other success factors that have a mild effect on performance, and these are listed below:

- High-quality new product project teams.
- Senior management commitment as well as involvement in the new products development process.
- A culture and working climate that supports innovation.
- Use of members of the organization from different functions to support and be part of the process.
- Accountability for new product results from senior management (Cooper, 2007).

Dahan and Hauser (2003) state that with everything being the way that it should be products will be of more value to an organisation if it provides the customer with more

benefits, speed to market is of utmost importance, is cheaper to produce as well as deliver. The organisation must pay attention to the fact that cost management must always be priority while ensuring that the products are of good quality and can deliver customer benefits timeously. Speed to market is very critical especially with how the market space has become very competitive however this has to be balanced with ensuring the features and benefits of the product are what come first when developing and delivering a new product (Knight, 2018).

Hauser (2007) states that how the organisation accomplishes these interchanges and synchronises the different elements that make part of its new product development process can be extremely taxing as well as critical to the prosperity of the organisation. The marketing department as the primary advocate of the customer throughout the organization in collaboration with other departments, must recognise its role to manage the process of new product development in a manner that ensures maximum benefits for the organization while at the same time deliver the necessary features and benefits to the end consumer.

Chablo (2000) argues that for the New Product Development process to be successful, there are factors that need to be taken into consideration as the most important elements in the new product development process. These elements are described by Chablo (2000) as technology, suppliers, customers and competitors and these are explained in detail in the following paragraphs.

a) Customers

According to Svendsen, Haugland, Gronhaug and Hammervoll (2011) close customer relations symbolize a high level of communication that allows for the facilitation of unique information from the customer to the producer or supplier of a product. Such information as stated by Chablo (2000) is very valuable to the new product development process in-order for the supplier to develop technologies that are beneficial to the customer and in turn the organization.

b) Technology

Mauerhoefer, Brettel and Strese (2017) state that technology and technological development have been considered as critical elements of business effectiveness. Particularly for organizations in the manufacturing sector, where product performance is linked to advancements in Carbomell, Escuder and Aleman (2004) add that technology that are most likely going to have an impact on cost-effectiveness, time to market as well as differentiation strategies. Chablo (2000) argues that the exploitation of innovative technologies is a must for any organization in the manufacturing sector as it provides a competitive advantage in new product development.

Van de Ven (2007) continues to say apart from recognising what the consumer requires the teams from the various departments working on the new product development process need to stay in the loop in terms of technological advancements and to keep an eye on what their competitors are up to. Substantial amounts of research on the development of new products is carried out in all universities research and development divisions of organizations carry out research as well. Hamm (2007) adds that understanding the type of research being conducted by competitors is one of the mainstays of market intelligence for the development of the new product process.

Suppliers epitomise a strategic component of the new product development process that should be carefully unified into the process of new product development.

c) Competitors

Hariprasad (2015) states that competitors alone can give an indication of what the market requirements based on the products they will produce. It is imperative for any organization to carry out a SWOT analysis in order to identify strengths and weaknesses of current and potential competitors of the product under development as well as the threats and opportunities that exist for the organization. This examination brings to the fore not just positive and negative aspects of the product. Hariprasad (2015) adds that the way an organization can gain a competitive advantage against other players in the market is when it can deliver value in a way that beats its competition as well as satisfying customer needs and requirements. Extensive research must also be carried out to assess the cost of producing and how this can affect the value offered to a customer to ensure that the product is sold at the most appropriate price that accommodates different segments of the market as well the economy (Hariprasad,2015).

d) Suppliers

Wilcox (2010) defines the process of involving a supplier in the new product development process as the abilities, investments, information, data, concepts that the supplier can offer to an organization. This process includes the responsibilities that they possess in terms of ensuring that the product's raw material requirements are in place by the time of production and launch on to the market and during the testing phase of new product development. Wilcox (2010) adds that involving suppliers in new product

development has the potential to bring about higher innovation through knowledge transfer as highlighted above thereby leading to increased financial performance for the organization. Van Echtelt, Wynstra, van Weele and Duysters (2008) stated that wide supplier involvement in product development processes increases the efficiency, time to market as well as and product quality in product development. Processes involving new product development must therefore be sensitive to the requirements of competitors, technology, customers and suppliers. These four factors will also in turn affect the performance of the new products in the long run especially for small technology based firms as stated by Pellikka and Virtanen (2009).

Dahan (2003) states that integrating communication with the customer into the new product development process is important at every stage starting from the stage of identifying opportunity identification and idea generation through the actual testing and launching of the product or service. Van de Ven (2007) further argues that the customer is influenced by their surrounding environment including the economy as well as the political environment. Organisations must ensure that they are proficient at not only recognising customer requirements but also having the foresight to understand the needs that customers themselves may not be able to articulate with ease (Akpoymare, Adeosun & Ganiyu, 2012).

Brierley (2002) adds that new product development research in recent times has focused on speed of production and time to market. According to Brierley (2002) the belief is that with the advent of technology in the 21st century, time to market has become one of the most important factors in new product development of organizations in the manufacturing sector. Taking too long to introduce a product in the market is no longer

cost effective due to market dynamics changing more rapidly and competition is fiercer that it was before. The above-mentioned literature review allows for New Product Development performance measures suggested by previous researchers to be grouped into three main categories. According to Owee Towang and Rasli (2011), the three categories are :

- a) Measurement of financial performance focusing on product cost, sales quantity and profit.
- b) Measurement of customer satisfaction focusing on product reliability and number of customers who purchase the product.
- c) Effectiveness of the new product development process through focusing on Time to market as well as quantity of products produced per year (Owee Towang & Rasli, 2011).

2.3 Criticism of use of Financial Measures only

Hart (2010) cites The American study by Hayes and Abernathy (1980) which recognizes the disadvantages of focusing on financial measures of performance have on manufacturing businesses. While most businesses may focus on the quick return on investment other aspects such as time to market and customer satisfaction falls on the wayside. These short-term financial measures of performance are further criticized by Fujimoto (2013) when considering suitable performance indicators in strategic market management as he states that it is necessary to develop performance indicators that will reflect long-term viability and health of a product or service.

Maidique and Zirger (1985) also looked at the issue of using a one-dimensional approach to measure the success or failure of new product development and the need

to consider non-financial measures of success as highlighted above. An example of this point is given by Maidique and Zirger (1985) giving details of a company which, having developed a product based on a new technology, found it to be a failure when introduced into a new market. However, because the company gained valuable experience in the technology and the new market it allowed them to go on to introduce successfully new products to the market (Maidique & Zirger, 1985).

2.4 New product development

New product development is defined as the process of creating a new service, product or a completely new market for either an old product or a new product. This step in the process is considered the introductory step in new product development and which leads to involves numerous steps that should be carried out before the actual product can be placed onto the market and these are outlined in the following sections of the document. New product development is usually done to develop an item that may be able to compete with an already existing product and/or service. This process of new product development can also be done to re-engineer product that has been in production for some time. The new product development process is crucial to any business that wants to keep abreast of market changes that can affect its operations in the long run (Business dictionary, 2018).

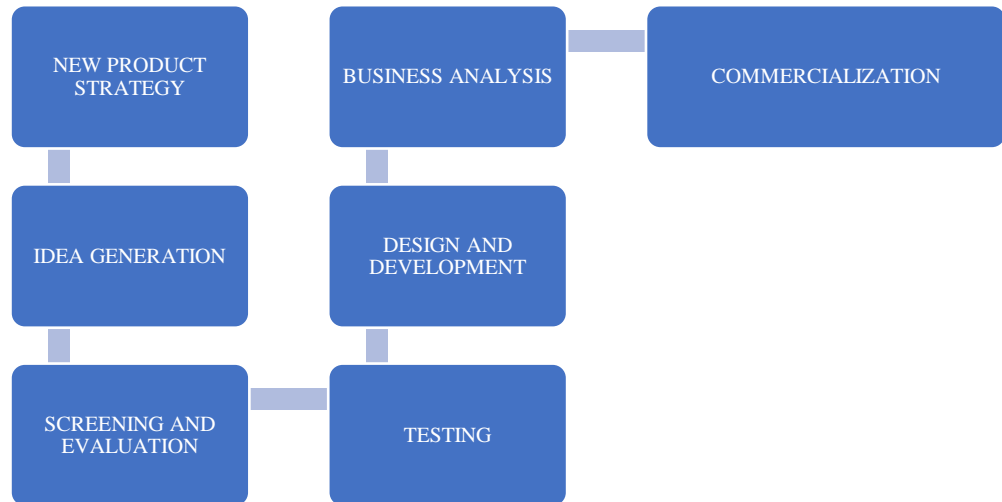
According to Trott (2008), product development, also termed new product management, is a sequence of steps that included steps such as the conceptualization, design, development and marketing of newly created and rebranded goods and/or services. Trott (2008) adds that the objective of product development is to cultivate, sustain and increase a company's market share by satisfying the needs and demands of the consumer and customer. Not all products produced will appeal to every customer,

so it is imperative to define the target market early in the development stages. Quantitative market research should be conducted at all phases of the design process, including before the product is considered, while the product is being designed and after the product has been launched to understand market dynamics and how the product can be altered to respond to market needs.

According to Hauser (2007), effective new product development is an important basis of the organization's success. The financial benefits realised from effective new product development can assist a wide number of manufacturers fight against the slow-down of growth and profitability of already products and services that have been on the market for some time and are potentially nearing the end of their life-cycles (Wilcox, 2010). Hauser (2007) states that a 1990 study sponsored by the Marketing Science Institute found that 25% of sales for successful organization were resultant from new products.

According to Urban (1997) the brand Nike has developed its overall brand reputation and appeal well beyond the territory of athletic footwear due to its successful introduction of other products such as soccer equipment ,golf equipment swimwear, including products that are used for sports such as basketball as well as baseball (Urban, 1997). Cooper (2005) argues that a strong market orientation to all development projects is of utmost importance and product development projects need to be market-driven and customer-led. The need to sell a unique and superior product in response to the voice of the customer and consumer is required to achieve market acceptance (Armstrong, 2008).

Figure 2.2: New product development process (Trott, 2008)



a) Stage 1: New Product Strategy.

According to Trott (2008), during the initial stage, the process links the new product development process to company objectives and provides emphasis for ideas or concept generation and strategies for creating selection standards. It involves the identification of standards and activities that affect new product development as well as brainstorming new products. A more formal product development strategy can be applied once the cross functional teams have agreed.

b) Stage 2: Idea generation and analysis.

Idea generation is defined by Kotler and Armstrong (2011) as the continuous and systematic process for new product opportunities, including updating or changing an already existing product. This includes activities carried out during searches for product ideas that meet company objectives as mentioned above. It is imperative that these ideas meet company objectives in order to achieve the overall goals for the organization. Trott

(2008) adds that this part of the process involves a closer assessment of the product concept itself. Market research and concept studies are undertaken to determine if the idea is feasible or within a relevant business context to the company or to the consumer. The purpose of the feasibility analysis is to assess whether a market exists if at all, as well as to understand if there is demand for that product (Kotler & Armstrong, 2011).

Ideas for new product development exercises may be generated from a number of different sources and these may departments that are particularly tasked with carrying the research and development work for organisations as well as other employees. Other sources of ideas come from external sources such as competitors, suppliers, customers and distributors as well (Ritter & Gemunden, 2003). Managers are required to evaluate these ideas and look closely at the opportunities that already exist in the market. The fundamental questions about new ideas must be asked are; whether the market and the product are real, if the product and the company will win, and whether the product is worth producing (Day, 2007). The organisation should be in a position to fully respond to the questions before further developing the new idea.

c) Stage 3: Screening.

The screening process according to Trott (2008) constitutes of an initial examination to determine which ideas are relevant and require more attention. Screening encompasses turning an identified product prospect into a successful project idea. This step allows for the organization to take the infeasible and focus on the supposed cash cows for the organization. Unsuitable ideas should be determined through objective consideration. As part of the screening process business analysis is an important step as it allows for the organization to outline the value of creating the new product. Business analysis as

stated by Trott (2008) goes on to assess the new product ideas based on financial factors which include Return-on-investment, sales volume and profit tabulations.

d) Stage 4: Development.

Cooper and Kleinschmidt, (2007) refer to development as a process transforms the idea into an actual tangible product that can be reproduced for the benefit of the consumer. Product development involves ensuring the concept has passed the idea generation phase and has been determined to make business sense and have business value in terms of quantitative factors. Cooper and Kleinschmidt, (2007) add that the development and testing process is a necessary step in the new product development process. Customer opinion becomes imperative as they are the potential consumers of the product being developed. The product concept at this stage, must be tested using the actual targeted customer base by way of doing customer immersions, focus groups as well as wet sampling. Trott (2008) adds that the testers' reactions can then be used to alter and further develop the concept according to the feedback given from the research carried out.

e) Stage 5: Testing.

Trott (2008) argues that commercial experiments are necessary to authenticate all business judgments in relation to the new product. An initial version of the product that has been determined to have business relevance and value must be created to check whether the benefits the product purports to provide are exactly what it offers. In this instance it will not be the final cut of the product but a model of it for testing purposes.

f) Stage 6: Commercialization.

The final step of new product development process according to Trott (2008) is commercialisation of the product into the market. This is the stage when the final product is launched on the market. Commercialization is defined as the successful development of the new product concept, launching it successfully on to the market, and its acceptance by the consumers as well as buyers (Eyal, 2014). Commercialisation that is successful is linked with growth of market share and improved performance in new markets (Cooper & Kleinschmidt, 2007). Trott (2008) argues that it requires the marketer to accurately grip the entry timing and scale of influence into the market. In addition, commercialising a new product contains several new activities, such as building the price, place and promotion strategy (Aarikka-Stenroos & Sandberg, 2012).

The manufacturing sector in Zimbabwe has declined in line with the decline in economic activity for the past decade due to various factors including the hyperinflationary environment that peaked at an official figure of 231 million per cent in 2008 (CZI Survey, 2009). In this regard the manufacturing industry requires a strategy to improve and restore the manufacturing competitiveness it once enjoyed as the playing field has changed and it presents new challenges. To survive these challenges that come along with globalization, Zimbabwean Fast-moving consumer goods companies need to become internationally competitive through new product development and innovation and to elevate the level of manufacturing superiority to attain international competitiveness and drive sales revenue growth. Therefore, it is against this background that a study will be conducted, seeking to assess the performance of new projects at Cairns Foods and how the business is affected by either the success or failure of these.

Many manufacturing companies can add products to its existing product lines in order to cater for different market segments. Eyal (2014) further argues that firms can add complementary and supplementary products to its main products to provide a wider offering. Complementary products are ones that can be used simultaneously with other products, while performance and quality are upgraded in primary products through the manufacturing of add-on products. Kotler and Armstrong (2011) state that adding new products to an existing product line will create a larger range of market segments such as low, medium and high-income earners. The idea is to position the product aggressively against the less well-positioned competitors in order to promote rapid growth and profitability.

Kotler and Armstrong (2011) add that this growth will increase a firm's market share and will benefit its long-term goals of profitability and return on investment. After entering into a segment, manufacturing companies should come up with a penetration strategy to further position itself into the market segment. For example, according to Porter's Five Forces model using a low-price strategy encourages instant penetration into the market and is a barrier to entry for competitors. Nonetheless, it involves opportunity costs in the form of forgone profits possibly in the first year or so. However, manufacturing companies must be wary of using this strategy as they need to take into consideration whether they are prepared or even can afford to put money into a market segment that is not performing (Beck, 1995). New product innovation can be viewed as an organizations core competence helping the company to develop a competitive advantage by focusing on unique features and abilities that are not easily copied by competitors for example Mercedes Benz and their Avant Garde vehicles.

Hauser (2007) argues that from an all-inclusive marketing viewpoint, organisations that are in tune with their consumers' needs and wants ensure that even their manufacturing processes and structures to develop new products is aligned to this. Constant and direct communication with customers through organization initiated and funded market research is an essential foundation of new product development and it allows manufacturing organizations to learn and understand their needs and tailor products and services to their consumers' unique requirements. This direct consumer communication allows firms to gain a vast amount of useful customer insights that can and will influence all areas of the marketing mix which are product decisions, pricing decisions, distribution decisions and promotion decisions (Kotler & Armstrong, 2011).

Unfortunately, the new product development process is not as simple and is a taxing and difficult process for any organisation. Hauser (2007) states that innovation is risky and manufacturing organizations normally invest a large amount of money as well as time in new product ideas without any tangible evidence that the product may become successful making them expensive failures. However, being in manufacturing and not actively innovating can be the difference between the success or failure of an organization (Hauser, 2007).

Based on the Coca Cola Company sustainability report (2018) although the product did not have any problem in terms of quality and taste, the company tried to make a new version of Coca Cola in response to the Pepsi hype and it failed dismally on the market. This is a classic example of launching a product without doing enough research, or rather as the adage says: if it ain't broke, don't fix it. Another example is that of Henry Ford who pioneered the way in the development of the motorcar industry in the 1950s

who introduced the Edsel motor vehicle and lost more than \$100 million. A number of factors played against the car manufacturer which included the fact that the name of the new model did not connect with the consumers, the pricing strategy used was not ideal and lastly it was launched during a national recession leading to the huge losses faced by the organization. Three factors come into mind that's is time to market, market feasibility and pricing which if not done correctly can lead to the great loss experienced by the Ford Motor Company.

Cooper and Kleinschmidt, (2007) argue that in any organisation the new product development process works best when it can take advantage of the human resources that are available and can exploit these for the benefit of the organisation. Insight on new product development can come from various departments such as engineering, production, marketing and the sales department being the greatest contributor to this process as they have direct interaction with the intended market. Booz, Allen and Hamilton (1982) state that no single department of an organisation can single-handedly represent the needs and wants of the customer as such the technical, operational, and financial capabilities of the manufacturing organization require the involvement of key individuals in the organisation. Booz, Allen and Hamilton (1982) add that the exchanges between cross functional teams are necessary in prompting the success of the new product development process. The new product development process gains from intel amassed from external sources which can be from customers, competitors, and deliberate partners such as the manufacturing organization's suppliers (Booz, Allen & Hamilton, 1982).

Kotler and Armstrong (2011) state that it is imperative that the new product development process should be handled as an all-inclusive process that recognises the interrelationships amongst the major measures of new product development success such as:

- Customer contentment,
- Speed-to-market, and
- Cost proficiency,

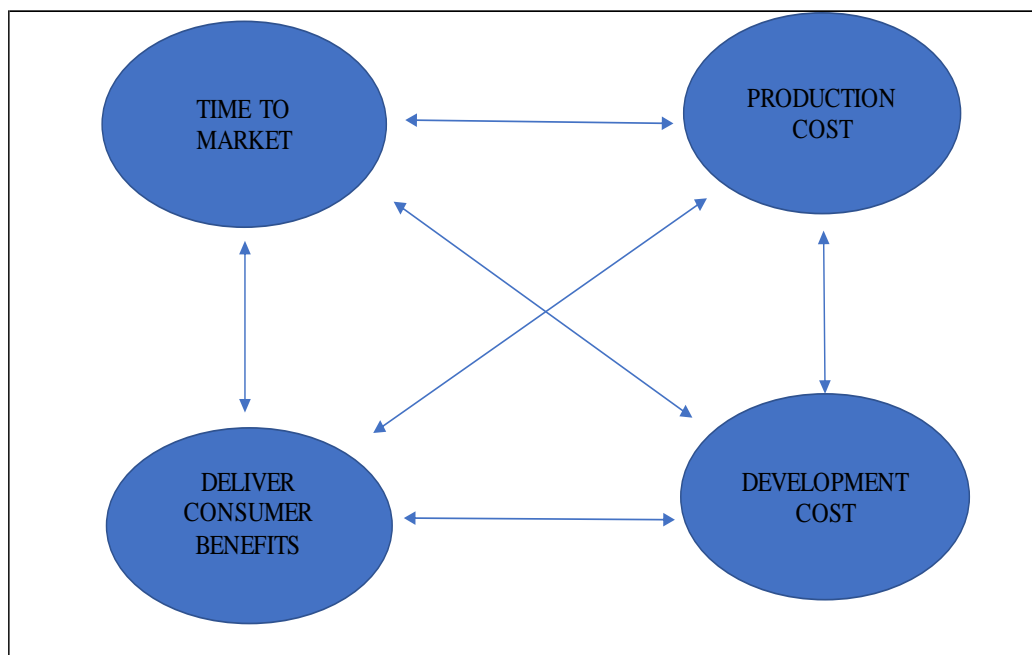


Figure 2.3: Trade-offs in New Product Development (Hauser, 2007).

2.4.1 Factors contributing to the failure of new products on the market

a) Market segmentation

According to Fujimoto (2013) the marketplace is becoming more segmented and moving toward more niche products. Niche products generally have low demand and small markets however they fetch more revenue at any given time. Focus was placed mass markets as a means of getting the most value of the product. Now as suggested by Dahan (2003) we have demassification where customer groups are becoming more

segmented into smaller and more focused groups responding to targeted commercial products. Fujimoto (2013) adds that for example, In the Internet Age, retailers like Amazon and Apple are not inhibited by physical shelf space and can offer consumers a much wider variety of products, yet fewer sales can produce big profits. These sites provide the uniqueness and convenience that most consumers require today.

b) Speed to market

Fujimoto (2013) argued that more competitors are offering targeted products and that are requiring faster speed-to-market. Companies offering a broad range of products or services are now experiencing intense pressure from competitors offering specialized solutions and beating them to the punch by inventing fresh speed-to-market strategies Van de Ven (2007). For example, Virgin Group Ltd. is known mainly for its music and airline businesses, but it has entered several new businesses including mobile phones, credit cards, hotels, games, trains, even space travel and very quickly. Virgin Comics, aimed at India's multibillion-dollar comics market, went from idea to public announcement in less than 11 months (Van de Ven ,2007).

c) Innovation laggards

Hauser (2007) states that some traditional companies may not survive drastically innovative change as is the case of National Foods and Chimodho pre-mix (National Foods Sales Reports,2017). Most Zimbabweans know Chimodho as a product their grandmothers used to make from scratch in a pan over the stove, bring them the same mix in a packet is something they may not be entirely ready for or resonate with. Dahan (2003), stated that when successful companies are faced met with technological advancements that can change their market space, they are most likely to make the

wrong decisions due to the fact that smaller companies are more open to taking risks as compared to larger corporations. He argues that, for a large corporation to take advantage of technological breakthroughs may prove a daunting task. Dahan (2003) goes on to say that as a strategy the large corporate can open a subsidiary of its company that focuses on innovation and technological advancements (Daramola, Bello & Okafor, 2014).

d) External forces for change

Fujimoto (2013) states that demographic characteristics and changes are occurring at a fast rate all over the world and having the workforce becoming more diverse may influence how a product is perceived and adopted and these characteristics apply to the Zimbabwean situation as well. Millennials (those born after 1980) are different from their parents in their views on everything. Hauser(2007) adds that technological advancements may be one of the greatest forces for changes in productivity. The advancement of technology has led to the development of illegal copycats especially in China and elsewhere to make pirated versions of almost anything including cell-phones, tablets and DVDs (Knight,2018).

Day (2007) argues that customers are also becoming more demanding, being more inclined to take their business elsewhere if they do not get what they want from a given company. Thus, firms such as Econet and Edgars in Zimbabwe actively collect information about customer preferences and try to address them in their new products. This data base aids an organization to engage in targeted activities equipped with information.

Kotler and Armstrong (2011) state that social & political pressures can create great pressures for organizations as well. Kotler and Armstrong (2011) state that planning on the right products to offer to a target market is a demanding task that requires insight into the customer's needs, wants and demands. Therefore, according to Knight (2018) the development of new product strategies can be an important determining factor of sustainable company performance. Product strategies involve product mix decisions, product life-cycle strategies and the introduction of new-product developments (Cant, Wiid & Kallier, 2015).

According to Qiu (2014) the strategy a manufacturing firm develops for its product portfolio is viewed as a critical element of the company's overall corporate strategy. Marketing as part of the strategy begins with building an offering that brings superior value to target customers and products are key to its success. A product is defined as a tangible or non-tangible good or service that is offered to the customer in exchange for some unit of value (Cant et.al., 2015). For a company to grow its share of customers and to build customer loyalty it is imperative to sell the right product to the right customer in-order to create sustainable business practices. According to Knight (2018) companies are therefore urged to create a strategy for developing and marketing its products to build a competitive advantage.

Each product has a number of various attributes that make it unique. These attributes can be categorized as tangible being the ones that are physical or intangible which are 'pseudo-physical' aspects of the product (Akpoymare, Adeosun & Ganiyu, 2012). The most important attributes that drive a consumer to purchase can be product quality, features as well as design. Product attributes play a substantial role in product strategy

from both perspectives of the marketer and consumer. The marketer uses product attributes to differentiate between his product and that of the competitors and helps to develop a positioning strategy based on relevant attributes the consumer will find beneficial (Akpyomare et.al., 2012) Therefore, it is important to pay attention to these attributes as they present competitive advantage against other organizations

As argued by Daramola, Bello and Okafor (2014), branding and packaging have an impact on a product as well. Branding and packaging are attributes that are designed to have a positive effect on consumer purchasing behavior and the organization's image is seen through its branding and packaging. Wilcox (2010) add that packaging is a prime instrument for communicating and branding of products to consumers and plays an important role in the branding strategy of fastmoving consumer goods.

The packaging of a product becomes the symbol that communicates its visual elements which then steer the consumer decision making process (Armstrong & Kotler, 2011). Branding is much more than a name of a product. It is according to Wilcox (2010) a combination of name, term, sign, symbol and design, that have an influence on consumers by differentiating the product from those of the competitors Daramola (2014). A positive brand image can be recognized through marketing campaigns to enhance the consumers knowledge of a brand. If consumers have the requisite knowledge of a brand, the company could potentially spend less on branding and marketing campaigns while still being able to achieve higher sales. Customers are more willing to pay a higher price for the product if they place great confidence they put in

the brand. Hence, branding and packaging are a strategic device of importance in product strategy planning (Daramola *et al.*,2014).

Product diversification has been one of the most widely adopted marketing strategies for opening new markets and gaining huge market shares (Qiu, 2014). Kotler (2011) argues that companies must continually search for ways to improve the selection of products in their product offering to achieve organizational goals (Knight, 2018). In line with this concept, effective product management is about making the calculated decision on which new product the business will focus on to grow market share as well to satisfy customer needs and requirements. According to Kotler and Armstrong (2011), new-product development is uncertain, and many new products fail. To prevent this, a successful NPD requires product mix depth and a customer-centered effort to ensure that the needs of the consumer are met (Sethi, Smith & Park, 2001).

e) Product Life-Cycle

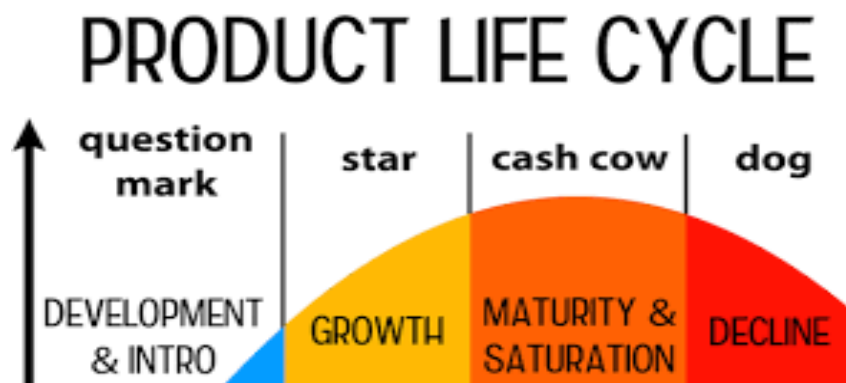


Figure 2.4: Product life Cycle Charles (2007).

According to Sharma (2013) once introduced the new product, any organization would want their products to have long life spans. As a planning tool best used to interpret product and market dynamics, the product life-cycle concept maps out the life span of the product in which every product passes through several life-cycle stages. Sharma (2013) argues that the product life cycle has four distinct stages and each stage poses new main marketing challenges requiring alternative marketing strategies and tactics to keep the product alive (Sharma, 2013).

According to Charles (2007) the introduction phase is the first stage in any product life cycle begins when the new product is first launched onto the market. It takes time of a new product to sell in large quantities. This can be caused by various reasons including logistics, cost of production or the market may not be quick to jump onto the new product. The organization may need to alter the marketing mix to meet outlined sales goals. According to Kotler (2011) in markets riddled with intense competition it makes economic sense to invest heavily in promotion and to adopt a high-volume low-price strategy to launch the products in the market (Kotler,2011).

According to Charles (2007) The second stage the growth phase is entered by the product when the market is satisfied, and the demand has grown. During this period sales volume will start to go up rapidly and this is the ideal time to differentiate the product from competition maybe by adding a new feature. This is to ensure that the customer can differentiate from competition and can make a more informed decision before making a purchase (Charles, 2007).

Charles (2007) states that during the final phase of the product life cycle is characterized by a decrease in sales, decrease in profit as well as a decrease in advertising. According to Kotler (2011) It may be the end of the rope for most products and may require

promotional activities to revamp the product, rebranding or re-engineering the product into something new. On the other hand, it may make sense to remove the product from the portfolio (Sharma, 2013).

2.4.2 Conceptual Framework

Underlying variables within the independent variables include effectiveness of the product development process at Cairns foods, effects of the success or failure of new products on the market and level of research carried out before the production of new products. On the other hand, the underlying variables or indicators for the dependent variable is new product performance. The conceptual framework is presented in **Figure 2.5**.

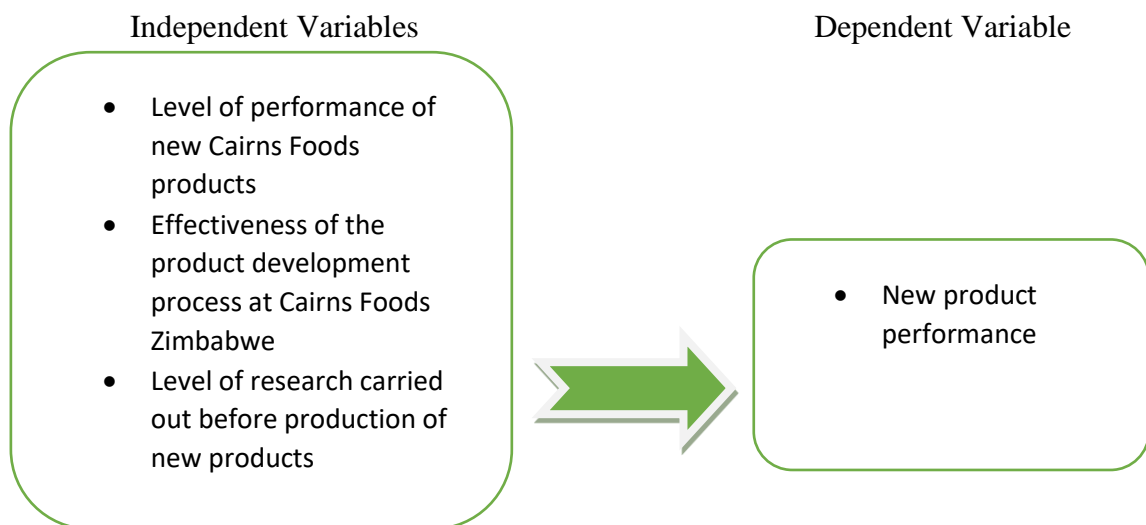


Figure 2.5: Conceptual Framework

2.5 Summary

In light of the issues highlighted above, this study focused on both financial and non-financial performance measures in-order to get a much more overall view of the factors that impact either the success or failure of new products on the market. A study carried out by Cooper and Kleinschmidt (2007) supports the above and unearthed the key drivers of new product performance at the business unit level which included: Revenues

and profits gained by the business from new products, success and failure rates of new products and for the organisation to be on time and on budget.

Mu and Di Benedetto (2011) state that Performance measurement systems are necessary for any organization as they can make the difference between success and failure of the organization. Evaluation is necessary on a regular basis to understand where changes are to be made. With increased levels of globalization, technological advancements and greater competition it has become imperative for any organization to implement a blend of financial and non-financial performance measurement constructs. Using financial measures alone does not give an accurate picture of an organization's performance and non-financial measures can help define the organizations commitment to stakeholders such as customers, employees and investors.

Using this holistic view as proposed by Owee Kowang and Rasli (2011) allowed the researcher to understand different types of success factors such as customer acceptance, market level measures, financial and timing measures.

CHAPTER 3 METHODOLOGY

3.1 Introduction

This chapter presents the research methodology of the dissertation. The section outlines the research strategy, the research method, the research approach, the methods of data collection, the selection of the sample, the research process, the type of data analysis, the ethical considerations and the research limitations of the dissertation.

3.2 The Research Design

A case study was carried out using quantitative research methods. The research used a quantitative research design to quantify the problem by way of generating numerical data that can be transformed into usable statistics. A questionnaire was used to collect data for the research through quantifying attitudes as well as opinions and other defined variables and results were generalizable.

The quantitative data is numerical in nature and expresses measured characteristics. It is more objective in nature and results can be used to generalize concepts more widely. Babbie (2011) states quantitative data is more efficient and able to test hypotheses. Data collected was analysed using the descriptive analysis techniques.

3.3 Population and Sampling

The research population was 213 employees of Cairns Foods Zimbabwe. The distribution of the population is presented in Table 3.1

Table 3.1: Research Population

POPULATION	NO OF PEOPLE IN THE POPULATION GROUP
Senior management.	10
Middle and junior management.	15
Sales persons	25
General employees including factory workers	155
Top retail customers	8
TOTAL	213

The population consisted of 213 employees who belonged to the following strata: Senior management was made up of 10 employees, middle management consisted of 15 employees, sales-persons were 25, general employees including factory workers made up the bulk of the organisation and were 155 and finally the organisations top retail customers were only 8.

3.3.1 Sample size

The sample of the research was made up of 137 employees of Cairns Foods Zimbabwe that was selected from 213 employees of the organisation.

With a total population of 213, a confidence level of 95% and a margin of error of $\pm 5\%$

Using Cochran (1977) formula for sample size

$$n_0 = Z^2 pq \div e^2$$

$$n_0 = 1.96^2 (0.5)(0.5) \div 0.05^2$$

$$n_0 = 384$$

Due to the population being small:

$$n = n_0 \div 1 + (n_0 - 1) \div N$$

$$n = 384 \div 1 + (384 - 1) \div 213$$

$$n = 383 \div 2.7981$$

$$n = 137$$

Therefore, the research sample size that is fully representative of the population is 137 respondents. The distribution of the sample is presented in Table 3.2.

Table 3.2: Research Sample

SAMPLE	SAMPLE TO BE SELECTED FROM EACH STRATA
Senior management.	6
Middle and junior management.	10
Sales-persons	16
General employees including factory workers	100
Top retail customers	5
TOTAL	137

After using Cochran (1997) formula for sample selection, the ideal sample size came to 137 respondents. The respondents were distributed in the following strata as follows: Senior management constituted 6 respondents, middle management had 10 respondents, sales-persons were 16, general employees including factory workers 100 respondents and top retail customers constituted 5 respondents.

3.3.2 Stratified Sampling

The population was portioned into subpopulations that represented Cairns Foods employees. Each strata defined a partition of the population that were necessary to the completion of the research. After each stratum was defined simple random sampling was used in order to minimize sampling error. The employees were partitioned into the following strata: senior management, middle management, general employees including factory workers, sales-persons and lastly Cairns Foods top retail customers.

The advantage of this technique is that dividing a population into a series of relevant strata means that the sample is more likely to be representative as each stratum is represented proportionally. This method of selection was used because it is a controlled procedure that assures that each population element is given a known none zero chance of selection.

3.4 Data collection Instruments

The researcher used questionnaires as the main data collection technique.

3.4.1 Questionnaires

A questionnaire was developed in order to research on the performance merits highlighted in section 2 of this paper. These constructs were captured by use of a 1–5 Likert-type scale, with anchor phrases. The term questionnaire is used to include all techniques of data collection in which each person is asked to respond to the same set of questions in a predetermined order (DeVaus, 2002) as cited in Saunders (2009). A structured self-administered questionnaire will be sent to participants and collected by the researcher.

In addressing key issues about the research instrument, the questionnaire was pre-tested before administering them to the full sample. This was to reveal the ambiguities, poorly worded questions that are too long, unclear choices as well as to indicate whether the instructions to the respondents were clear. The questionnaire was also pre-tested to check on the theoretical implications of the information produced and to check whether there were any practical problems inherent in the questionnaire.

The main advantage of using questionnaires is that many people can be reached relatively easily and economically. A standard questionnaire provides quantifiable answers for a research topic. These answers are relatively easy to analyse. Advantages of using questionnaires are that they are simple and inexpensive to use. They are relatively low cost. This makes it easy to distribute via mail or email or hand delivered as well as via a website. Using a questionnaire allows the respondent to remain in control as most people do not like being asked intrusive questions that may make them uncomfortable. Questionnaires eliminate the need of the respondent to reveal their identity therefore drawing more responses from respondents. Respondents may have control over the scope of their responses and can decide to give short or lengthy responses.

Questionnaires are an effective way of quantifying data from a sample group, and testing emotions or preferences. This method is very cheap and easy, where budget is a problem, and gives an element of scale to opinion and emotion. Qualitative data will aid in understanding the patterns in the quantitative analysis. The basic advantage is

that it offers a complete description, without limiting the scope of the research and the participants responses, (Collins& Hussey, 2003).

The use of questionnaires allows the researcher to avoid bias from both researcher and respondent. According to Moore & McCabe (2005), bias is defined as the combination of various design, data, analysis, and presentation factors that tend to produce research findings when they should not be produced. Bias is a form of systematic error, and there are innumerable causes. The causes of bias can be related to the manner in which study subjects are chosen, the method in which study variables are collected or measured, the attitudes or preferences of an investigator, and the lack of control of confounding variable. A self-completion questionnaire can avoid such bias by allowing respondents to detail their specific likes and dislikes in response to the questions asked.

While questionnaires may be simple and easy to administer questionnaires take time to complete because some questions may require full sentence answers. This might result in a lower response rate. Questionnaires are not always the best way to gather information. For example, if there is little previous information on a problem, a questionnaire may only provide limited additional insight. On one hand, the researcher may not have asked the right questions which allow new insight in the research topic. On the other hand, questions allow a limited choice of responses. If the right response is not among the choice of answers, the researcher will obtain little or no valid information. Another setback of questionnaires is the varying responses to questions. Respondents sometimes misunderstand or misinterpret questions.

3.5 Data Collection Procedure

Questionnaires were used as a method of data collection as they are easy to administer especially when some of the respondents may not be found in one vicinity. The research combined self-administered questionnaires and interview administered questionnaires based on different sub-sets of the population to gain a better understanding of the research objectives.

Data was collected with the aid of questionnaires to evaluate the employees as well as customers' knowledge and views on the performance of new Cairns foods products. Questionnaires were decided upon because they ensured a high response rate as the questionnaires were distributed to respondents to complete and were collected personally by the researcher. They required less time and energy to administer and offered the possibility of anonymity because subjects' names were not required on the completed questionnaires. There was less opportunity for bias as they were presented in a consistent manner. Most of the items in the questionnaires were closed making it easier to compare the responses to each item.

Face to face interviews were also used as a method of data collection. This method was decided upon to aid some respondents such as Senior and middle management who did not have ample time to respond to questionnaires. Owing to the nature of their jobs, time spent in meetings and busy schedules the researcher found it prudent to conduct face to face interviews in-order to obtain as much information as possible in a short space of time. This method of data collection allowed the respondents to ask as many questions as they needed to for clarity and the researcher was available to explain any ambiguities that were part of the research questions.

3.5.1 Reliability and Validity

The researcher was careful to identify and control for potential confounding variables so that associations between the dependent variable and the independent variable can be accurately identified and measured. The sample was appropriately sized to achieve reliable results and high statistical power. An insufficient sample size is more likely to produce false negatives and inconsistent results, and this was avoided.

A pilot study was carried out with 30 participants to test the validity and reliability of the questionnaire. Although bias in research can never be completely eliminated, it can be drastically reduced by carefully considering factors that have the potential to influence results during both the design and analysis phases of a study.

3.6 Analysis and Organisation of Data

After the data was collected it was organised and analysed. For analysis of closed-ended questions, a computer programme called Statistical Package for Social Sciences (SPSS) was used. Data was analysed by using descriptive statistics. Frequency tables were drawn and from this and the data was presented in pie diagrams and bar graphs. The open-ended questions were analysed through quantitative content analysis by the researcher with the aim of quantifying emerging characteristics and concepts.

3.7 Ethical consideration

The study was subject to ethical considerations. The researcher obtained Informed consent from the respondents before embarking on the research through a signed consent and briefing letter. The aim of this letter was to reassure respondents that their

participation will be purely voluntary and are free to withdraw whenever they saw it fit for any reason.

The above steps were taken to protect and ensure the dignity and welfare of all participants, as well as those who may be affected by the results of the research project. This obligation also entailed protecting them from harm, unnecessary risks, or mental and physical discomfort that may be inherent in the research procedure. Respondents were assured that no bribery will be used in order to entice respondents to participate and the data presented was not be fabricated or falsified.

3.9 Summary

In summary the research employed different methods of collecting data which included distributed questionnaires, observation as well as interviews in a bid to understand the performance of new products at Cairns Foods Zimbabwe. One questionnaire was administered by the researcher herself to collect the data from a sample of 137 respondents. The questionnaire had both closed and open-ended questions. The sample characteristics included adults who were employees or customers of Cairns Foods and were willing to participate.

Consent was obtained from the respondents themselves before engaging them in the research. Reliability and validity were further increased by pretesting the questionnaire. This chapter described the research methodology, including the population, sample, data collection instruments as well as strategies used to ensure the ethical standards, reliability and validity of the study.

CHAPTER 4 DATA PRESENTATION, ANALYSIS AND INTERPRETAION

4.1 Introduction

The purpose of this chapter is to present, analyse, interpret and discuss findings from the research. As mentioned earlier the research was a combination of both exploratory and descriptive research designs as it provides answers to questions such as who, what, when, where and how of the topic under study via questionnaires, administered by means of the drop-and-pick tactic, and interviews, as data collection procedures. Views from different stakeholders in the performance of new products at Cairns Foods are presented in this chapter. The chapter gives an analysis of the data through the use of tables, pie charts and graphs explaining the results based on the research problem in chapter one.

4.2 Data Presentation and Analysis

The researcher conducted interviews with senior and middle management at Cairns Foods and distributed questionnaires to junior management and factory employees of Cairns Foods and retail customers of Cairns Foods Products. The breakdown of the questionnaires and their response rate is illustrated in Table 4.1.

4.2.1 Questionnaire response rate

Table 4.1: Administration and response rate of questionnaires

Target	Response rate
Upper Management	100%
Middle Management	100%
Junior Management	100%
Factory Workers	100%
Retail customers	100%
Total	100%

The 100% response rate realised from this study is attributable to the design of the survey as well as the interest the respondents had in the subject matter. Respondents were highly motivated to respond and return the questionnaires.

4.2.2 Interview response rate

The researcher managed to conduct 16 interviews out of 16 that were scheduled giving a response rate of 100%.

4.2.3 Demographic data

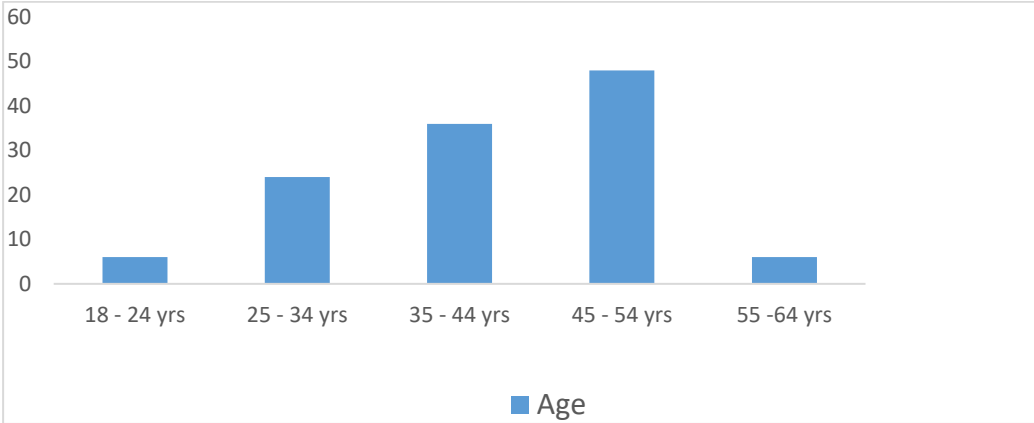


Figure 4.1: Distribution of respondents by Age

From the responses given, most of the respondents are aged 35 years and above, accounting for more than 75% of the respondents. The age group with the highest respondents is 45 - 54 years, with 40%, followed by 35 – 44 years with 30% of the respondents.

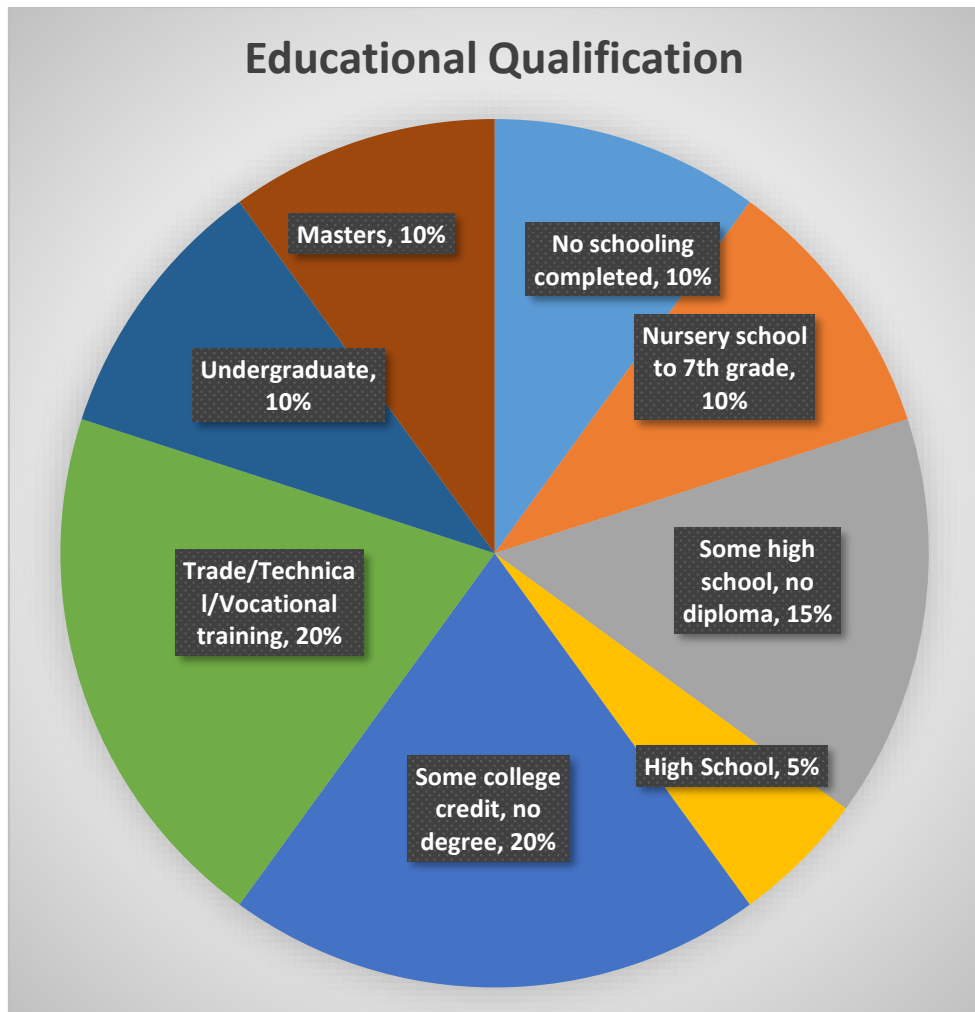


Figure 4.2: Distribution of respondents by Educational Qualification.

Some college credit with no degree and Trade/Technical Vocational training are the dominant groups with 20% each. These are followed by some high school with no diploma; no school completed; nursery school, undergraduate; masters and high school categories, with 15%, 10%, 10%, 10%, 10% and 5% respectively. Majority of the respondents are holders of a Trade/Technical/Vocational training qualification and below, accounting for 80% of the respondents. This shows that very few Cairns foods employees are holders of at least an undergraduate degree.

Table 4.2: Distribution of respondents by Designation

Designation	Proportion
Upper Management	0.05
Middle Management	0.1
Junior Management	0.1
Trained Professional	0.2
Factory worker	0.35
Retail customer	0.20
Total	100

Most of the questionnaires were deliberately given factory workers, trade professionals and junior management, who have a great part to play in the new product development process. Factory workers account for 35% of the respondents. These are followed by retail customers, trained professionals, middle management, junior management and upper management with 20%, 20%, 10%, 10% and 5% respectively.

4.3 Discussion and Interpretation

4.3.1: To assess the performance of new Cairns products on the market.

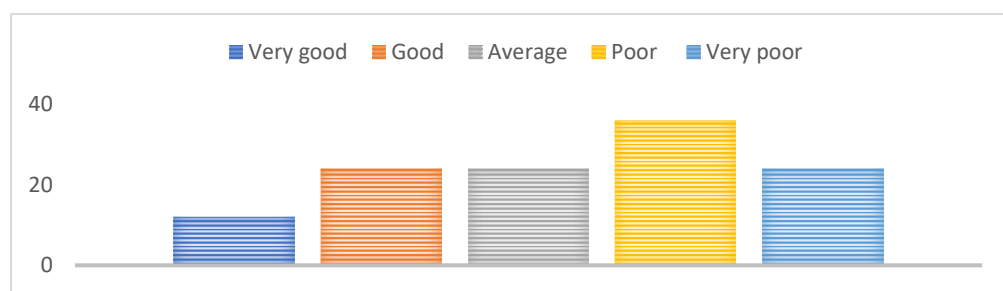


Figure 4.4: Distribution of respondents on performance of Cairn Foods products.

30% of the respondents noted that Cairns Foods products are performing poorly on the market. Cairns products are scoring poorly on performance, with only 30% performing

either very good or good. With the responses combined 50% of Cairns Foods products are performing either poorly or very poorly. Poor performance of new products can be caused various factors such inadequate research on market requirements, substandard quality of the product and failure to take advantage of technological advancements that allow for production at the lowest price possible. A study carried out by Cooper & Kleinschmidt (2007) supports the above and uncovered the key drivers of new product performance at the business unit level.

Table 4.3 Distribution of respondents on how well new Cairns Foods products perform in terms of the below constructs.

KEY: VG – VERY GOOD; SWG – SOMEWHAT GOOD; G – GOOD; P – POOR; VP – VERY POOR

Variable	V G	(%)	SWG	(%)	G	(%)	P	(%)	VP
Quality of the products	2	8.30	10	41.70	8	33.30	2	8.30	2
Consumer response to Cairns Foods	4	16.70	12	50.00	4	16.70	4	16.70	
Shelf off take	4	16.70	6	25.00	2	8.30	8	33.30	6
Rate of return	6	25.00	4	16.70	8	33.30	6	25.00	

About 80% noted that they rate Cairns Foods product as good, somewhat good or very good. This is an indication that customers are happy with Cairns Foods products. Fifty percent of the respondents' rate Cairns Foods products to be somewhat good regarding consumer response to Cairns Foods products. Regarding shelf off take, Cairns Foods products have a poor shelf off take, as cited by 33.3% of the respondents. On rate of return, Cairns Foods products perform quite well, as cited by majority of the respondents. It can be noted that some products have good shelf take off but a short life

span. This is typical when customers, technology, competitors and suppliers are not considered in the New Product Development process.

Performance has different dimensions and these include: percentage of sales; profitability; success rate of that specific product; and product life span on the market, among others. Criticisms have been raised on basing measurement solely on financial measures only. Results indicate that there is need to also consider non-financial measures of success. These short-term financial measures of performance are further criticized by Fujimoto (2013) when considering suitable performance indicators in strategic market management: it is necessary to develop performance indicators that will reflect long-term viability and health.

Table 4.4: Distribution of respondents on how performance of new products is measured for Cairns Foods.

Measurement Variable	Percentage
Profit tabulations	84.3
Sale Off Rate	75
Response from customers	50
Eagerness of customers to list product in their stores	61.4
As long as it is found in the market it is a success	20.8
There is no performance measurement of new products	31.25

Profit tabulations are the most used performance indicator, as cited by about 84% of the respondents. It is followed by sale off rate and eagerness of customers to have Cairns Foods products on their list, accounting for 75% and 61.4% respectively. The findings indicate that to a larger extent financial measures are used to measure performance as compared to non-financial measures. The use of financial measures only can be

detrimental to the organization as profits can be driven by high prices while the organisation is losing customers or market share. It is imperative for the organisation to consider its customers and potentially new ones, time to market as well as technology in the process of performance measurement. A study by Cooper and Kleinschmidt (2007), uncovered the key drivers of new product performance at the business unit level and these include; percentage of sales by new products, profitability and success rate of that specific product. However, literature notes that an all-inclusive new product development process a product is more valuable to the consumer and the organisation if it delivers customer benefits faster, is launched on time and can be produced and developed at low cost.

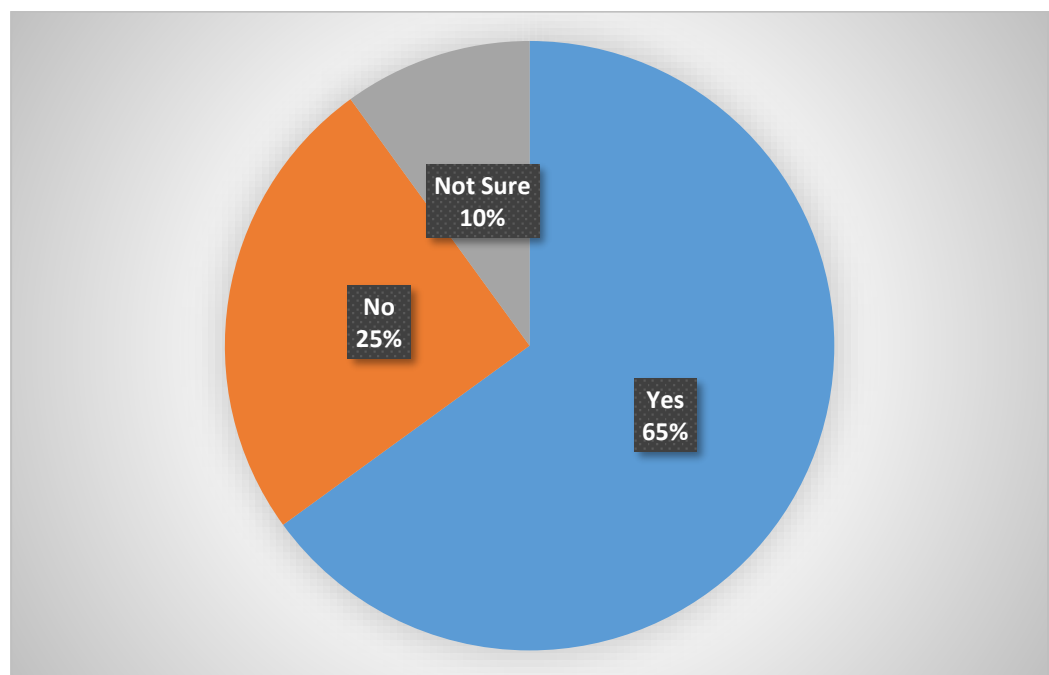


Figure 4.5: Distribution of respondents on whether they knew innovations employed by Cairn Foods.

Sixty-five percent of the respondents noted that they know of innovations employed by Cairns Foods. Thirty-five percent of the respondents are not aware of the innovation which Cairns Foods employed. While a large proportion of the respondents are aware

of innovations employed by Cairns Foods, the 35% indicates that more can be done in order to sensitize the market on what the organisations develops from time and time again. This is not only limited to new products but to already existing ones as well and this can be done through major marketing campaigns, billboard and the use of digital media platforms. Van de Ven (2007) argues that apart from considering the customer needs and requirements, new product development teams must always pay cognisance of technological advancements by suppliers and by competitors to ensure maximum success.

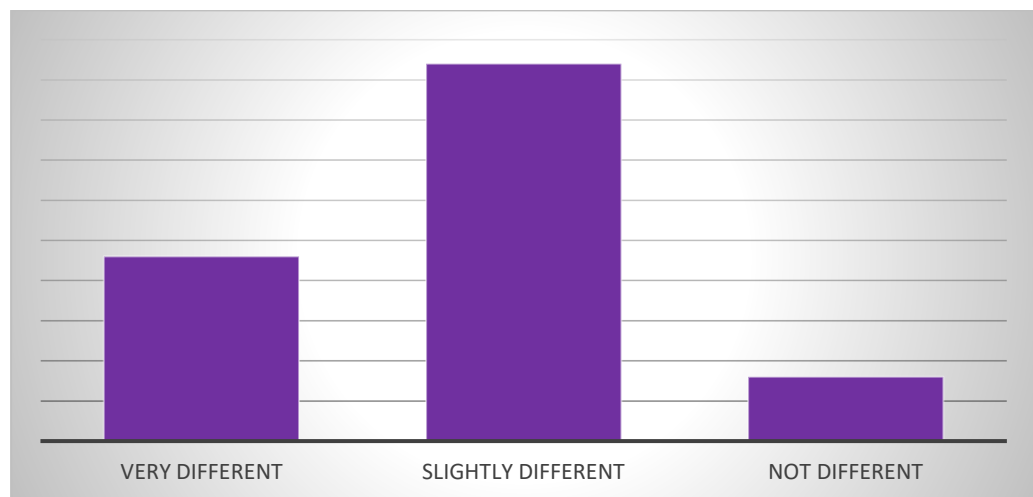


Figure 4.6: Distribution of respondents on how different the Cairns Foods innovations are from those in the market.

Majority of the respondents do acknowledge that innovations being employed by Cairns Foods are different to what is already in the market. Sixty percent noted that the innovations are slightly different, whilst 30% cited that the innovations are very different. However, 10% noted that the innovations that Cairns Foods are employing are not different from what the market is already offering. The danger in producing the same products as those that are already existing in the market is that consumers may fail to differentiate and will continue purchasing the one that landed on the market first.

This practice may have a negative impact on the overall performance of the organisation.

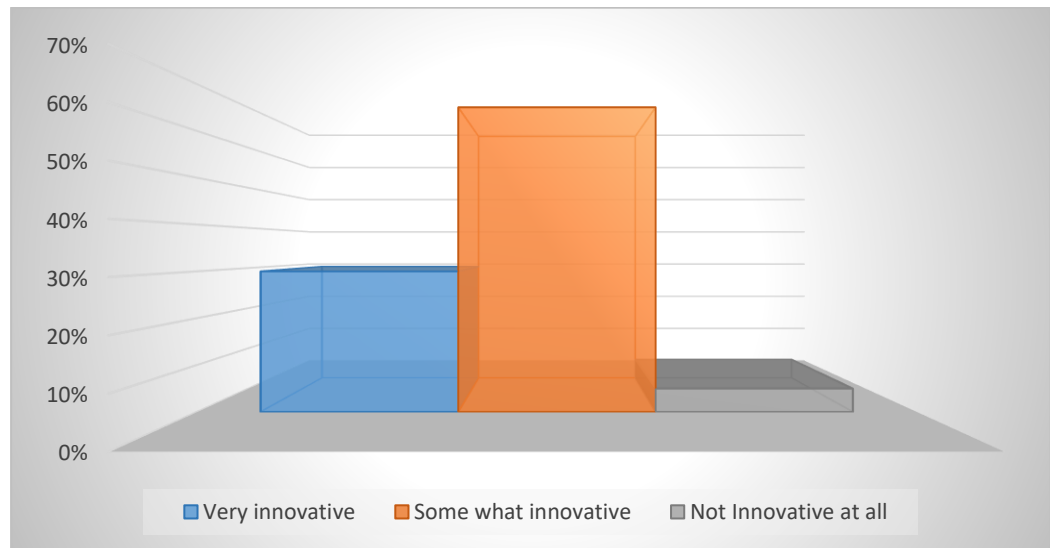


Figure 4.7: Distribution of respondents on how innovative they perceive the Cairns Food products to be.

Regarding how one perceives innovativeness of Cairns Foods Zimbabwe products, most of the respondents acknowledge that the Cairns Foods products are innovative. Sixty-five percent of the respondents noted that the Cairns Foods products are somewhat innovative. This is followed by 30% who noted that the Cairns Foods products are very innovative. On the other hand, 5% of noted that Cairns Foods products are not innovative at all. Cairns Foods is offering what its competitors are offering. Without much differentiation, it will be difficult to stand out against competitors.

4.3.2: To explore the new product development process at Cairns Foods Zimbabwe.

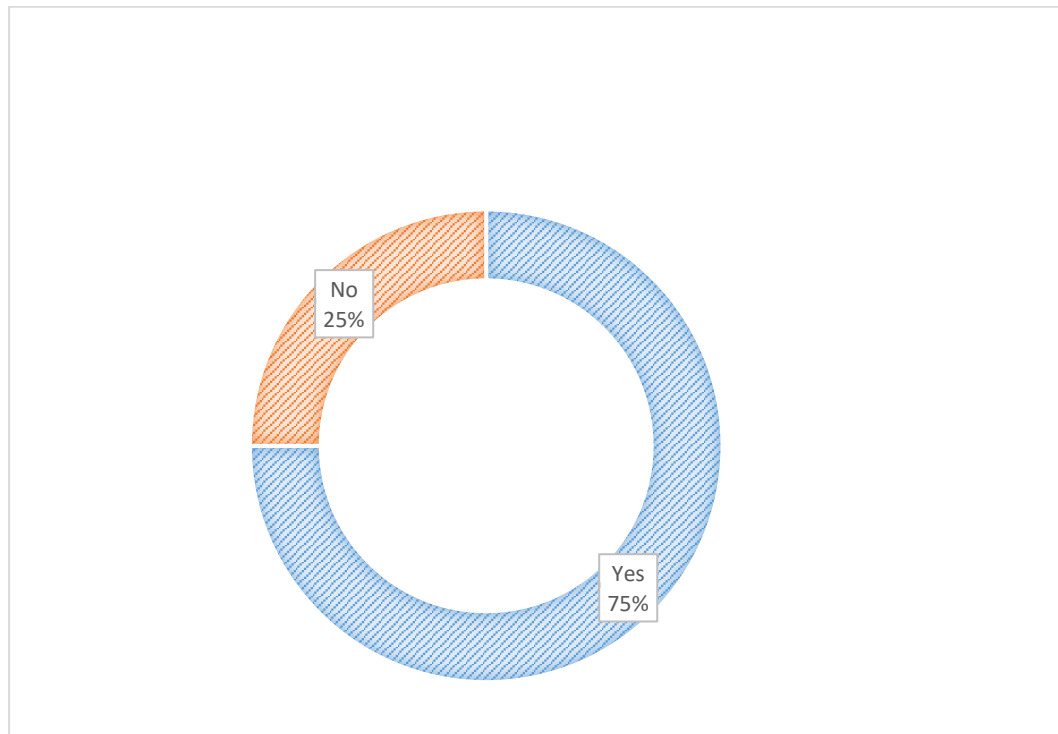


Figure 4.8: Distribution of respondents on whether one is aware of the existence of a New Product Development process.

Seventy-five percent of the respondents noted that they are aware of the existence of the New Product Development process at Cairns Foods. This is an indication that most of the employees and customers are aware of how the process of New Product Development is done. This concurs with literature which provides that new product development is a defined process of developing a new product or service or a new market all together. This implies that particular steps should be taken in-order to make the process a success. Trott (2008) adds that product development is a succession of steps that includes the conceptualization, design, development and marketing of newly created or newly rebranded goods or services. However, 25% cited that they were not are of the existence of New Product Development process at Cairns Foods. This implies that information dissemination maybe be limited at Cairns Foods.

Table 4.5: Distribution of respondents on how research is carried out at Cairns Foods.

Department	Percentage
Marketing Department	80
Research and Development	60
Professional Research Board	30
All the above	40

The marketing department of Cairns Foods carries out research on New Product Development, as noted by 80% of the respondents. This followed by use of the Research and Development Department, as cited by 60% of the respondents. This is followed by use of all of the above and use of Professional Research Boards, accounting for 40% and 30% respectively. This shows that most of the research undertaken by Cairns Foods is done in-house. While using in-house resources maybe ideal in some cases ideally it is wiser for an organisation to employ fresh eyes during its research processes. Using the marketing department as the lead researcher may lead to bias as they would not want a project to fail leading to altering of results. Using external researchers allows for objectivity and results that can be easily generalized to represent many other organisations.

4.3.3: To determine the process that is done before engaging in new product development.

Table 4.6: Distribution of respondents on whether research is carried out before a product launch at Cairns Foods.

Response	Percentage
Yes	65
No	35
Total	100

Sixty-five percent of the respondents cited that research is being carried out before a new product launch. This concurs with literature by Chablo (2000) who argues that for the New Product Development process to be successful, customers, technology, competitors and suppliers need to be understudied. Thirty-five percent cited that there is no research carried before new product launch. This could account for the failure of some of the products launched by Cairns Foods as there will be no adequate appreciation of the market and its needs.

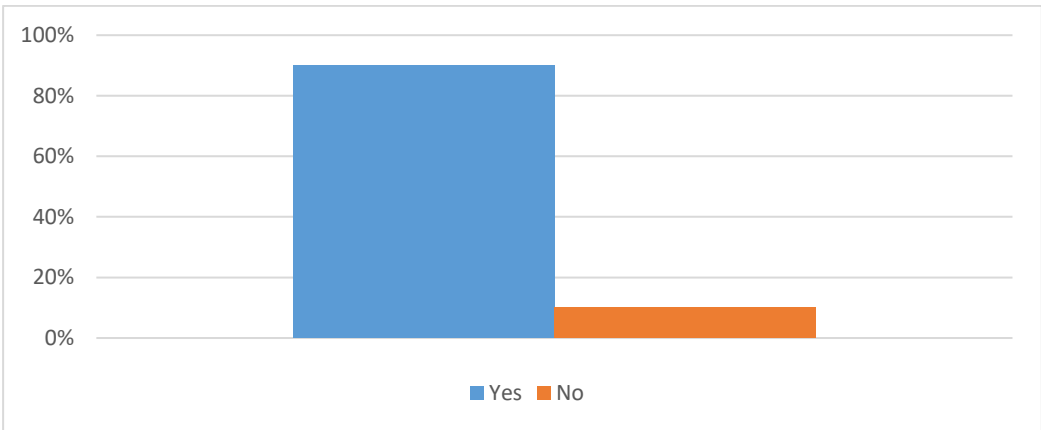


Figure 4.9: Distribution of respondents on whether carrying out research before launching a new product affects its success or failure.

90% of the respondents agree that carrying out a research before New Product launch affects the success or failure of the product. This shows that carrying out research before New Product launch is very important. It assists in coming up with a product which meets the expectation of the consumers and which will be acceptable to the market. An organisation must be able to research its target consumers in-order to gain valuable insights into what they want. Research allows for easier product positioning decisions as well as matters to do with selection of an appropriate distribution channel, pricing decisions as well as whether to focus on logic or the emotions of the consumer. Hauser (2007) adds that processes involving new product development must therefore pay attention to the requirements of customers, suppliers as well as competitors hence the need for carrying out research before new product launch.

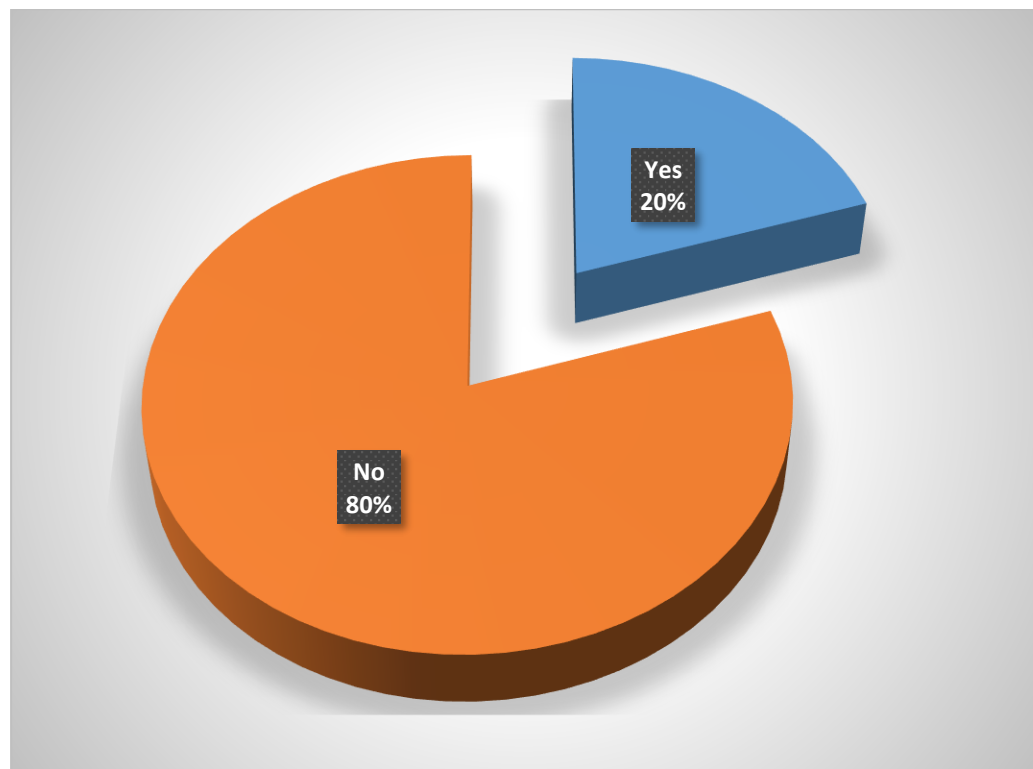


Figure 4.10: Distribution of respondents on whether products are launched internally before to Cairns Foods employees before they are launched into the market.

Eighty percent of the respondents cited that most of the Cairns Foods products are not launched internally before they are taken to the market. This process can be aligned with the testing stage in the new product development process where stakeholders have an opportunity to air their views, suggestions and comments on product improvement as very valuable information can come from internal members of staff. It is a necessary process that allows employees appreciate the product and master it before it is commercialized. In addition, it creates a sense of ownership by the employees. Without the internal staff buy in, products are bound to fail.

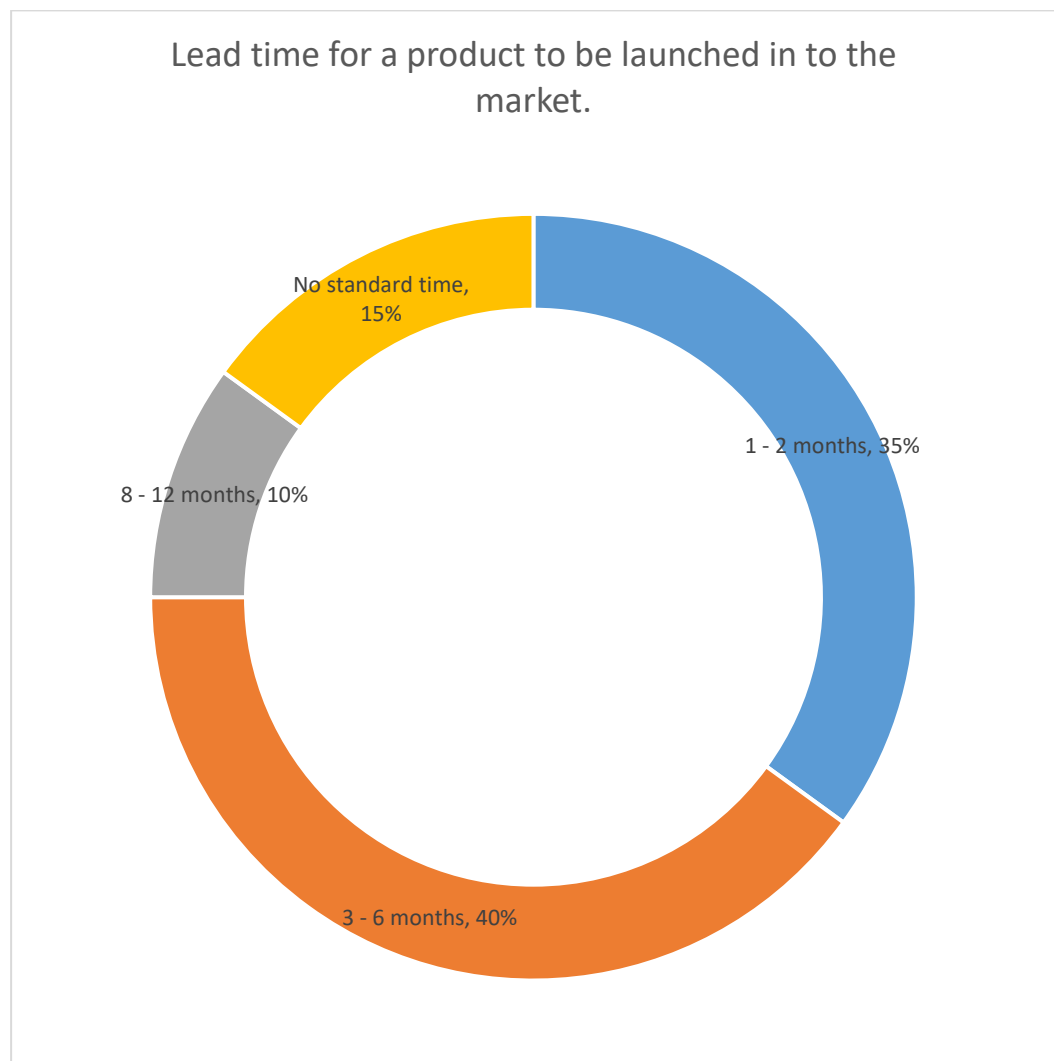


Figure 4.11: Distribution of respondents on whether there is a standard lead time for a new product to be launched into the market.

Most of Cairns Foods' products' lead time is between 3-6 months, as highlighted by 59% of the respondents. This is followed 1 -2 months, as highlighted by 35% of the respondents. Eyal (2014) adds that new product development research during the last decade has concentrated upon speed and time to market. The implicit, and at times explicit, beliefs are that: the rate of technological development is continually increasing, long product development times are not cost effective, markets are changing more rapidly, and market competition is increasing. Majority of the Cairns Foods products have a lead time of between 1 - 6 months, which could mean two things, either the products are being launched too early without proper research hence the rate of failure, or it could mean that Cairns is moving towards best practices.

4.3.4: To establish the availability of standard procedures manuals for new product development at Cairns Foods.

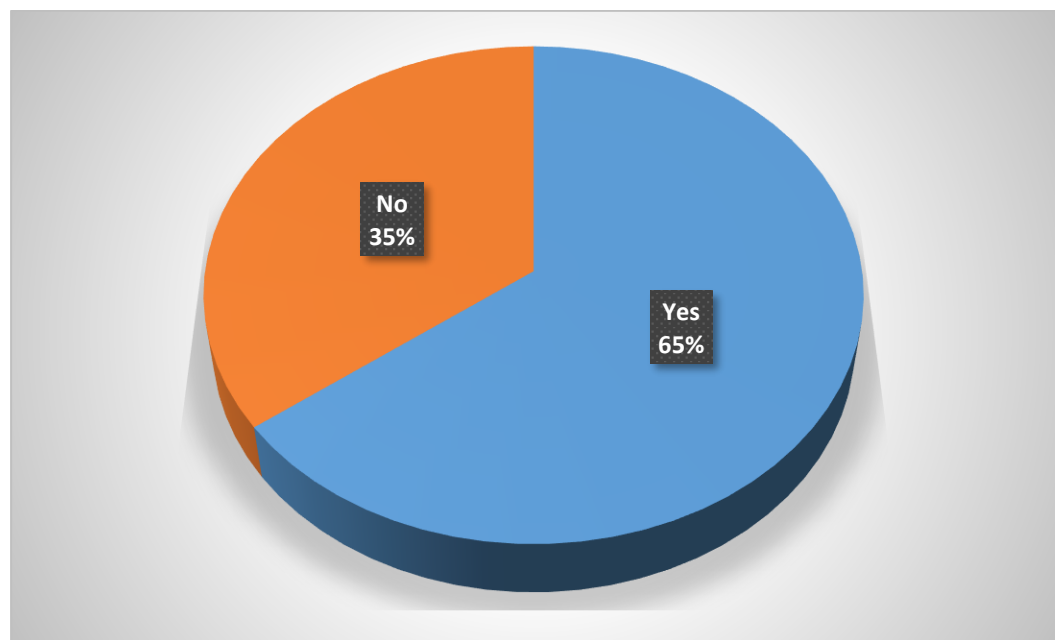


Figure 4.12: Distribution of respondents on whether there are New Product Development Standard Operating Procedures at Cairns Foods.

65% of the respondents agree that there is a New Product Development Standard Operating Practice at Cairns Foods. However, 35% noted that there is no New Product Development Standard Operating Practice at Cairns Foods. This could show that the procedure or operating practice is not well-known by all employees. In the absence of a well-articulated and laid down procedures, organisation or new product launch is difficult to implement. Organisations are bound to fall in the same pitfalls in almost every innovation. Having a laid down plan assists in refining and continuous improvement in the new product development process and its launch thereof.

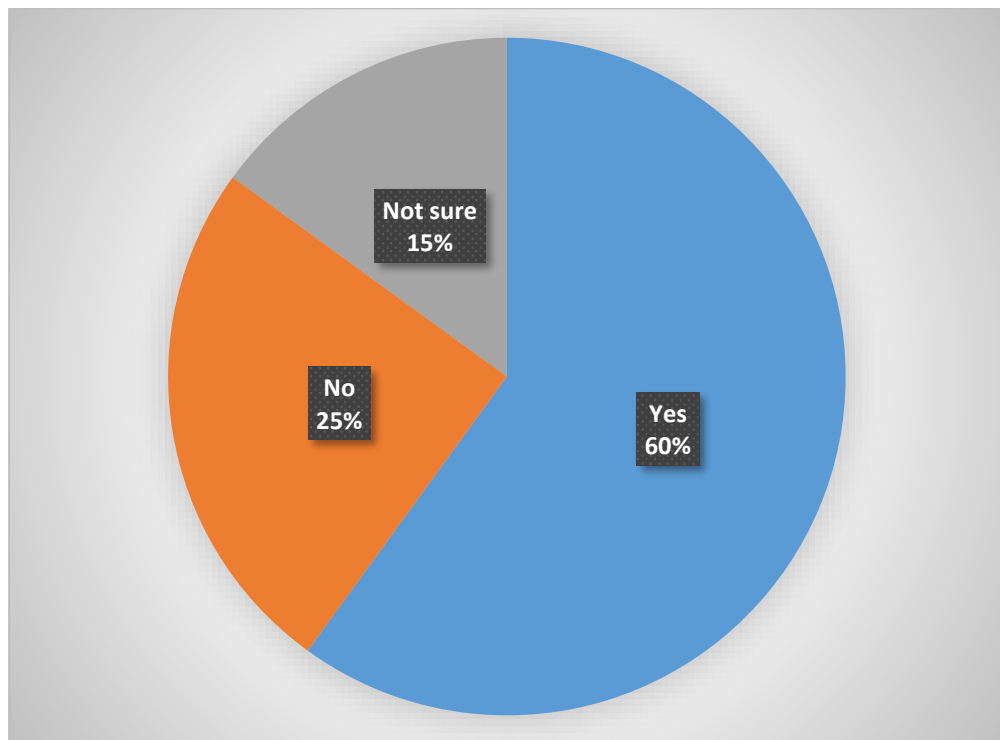


Figure 4.13: Distribution of respondents on whether there are Standard Performance measures in place for all new products at Cairns Foods.

60% of the respondents agree that there are Standard Performance Measures in place for all new products at Cairns Foods. However, 40% disagree that there are Standard Performance measures in place for all new products. This could show that the procedure or operating practice is not well-known by all employees. In the absence of a well-

articulated and laid down procedures, organisation or new product launch is difficult to implement. Organisations are bound to fall in the same pitfalls in almost every innovation. Having a laid down plan assists in refining and continuous improvement in the new product development process and its launch thereof.

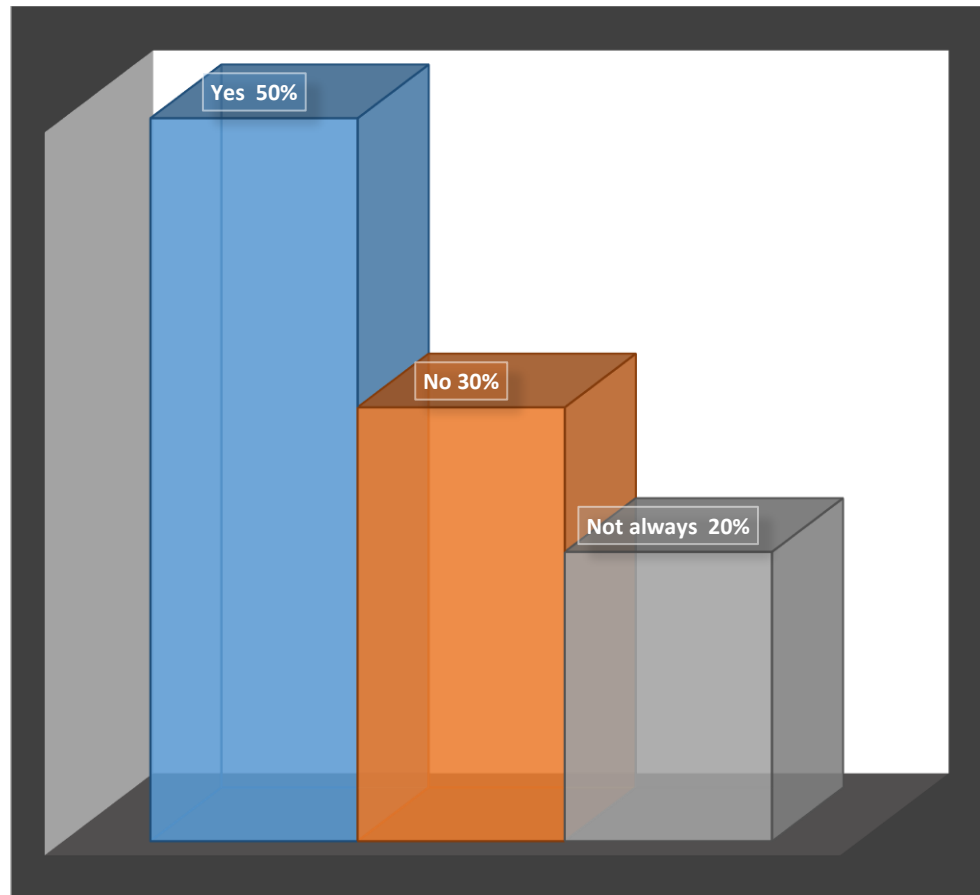


Figure 4.14: Distribution of respondents on whether these Standard Performance Measures form a Standard Operating Procedure for all New Products developed at Cairns Foods.

50% of the respondents noted that Standard Performance Measures in place products at Cairns Foods form a Standard Operating Procedure for all new products. However, 50% argue that these Standard Performance Measures do not form a Standard Operating Procedure for all new products. This could mean that for some of the products which Cairns Foods produces, the Standard Performance Measures do not form a Standard

Operating Procedure. Which could explain when most of Cairns Foods products are failing even after being successfully launched.

4.4 Summary

The chapter presented the findings from the data collection process and the results were interpreted and discussed. Findings were that Cairns products are scoring poorly on performance, with only 30% performing either very good or good. This proves that to a larger extent Cairns Foods Products are not performing well on the market. In terms of performance measurement constructs findings show that Cairns Foods employs both financial and non-financial measure of performance although to a lesser extent.

The chapter revisited the objectives of the study, data presentation, analysis and interpretation in tandem with the literature reviewed and theoretical framework explained earlier. The next chapter will provide further discussion with a focus on the conclusions and the recommendations emerging from the findings.

CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on summaries and conclusions of the findings and as well as proffering recommendations. The conclusions generated from the analysis and interpretation of collected data will be given. Recommendations are given to Cairns Foods on ways to enhance the performance of the organisation as well as the manufacturing sector. Lastly the chapter gives direction for further research.

5.2 Discussion

The study comprised of five chapters. The First chapter looked at the background to the research, statement of the problem, research objectives, limitations and delimitations. The chapter contained the overall view of the research. It gave an outline of the background of the study and how significant the research is to stakeholders. Research questions were also drawn as the flip side of the research objectives.

The second chapter discussed the literature review on the concept of performance new products as well as the process of new product development. It explored the various literature on the importance of new products and how they are vital to the success and prosperity of an organization. Chapter 2 consists of the literature to identify similar work done within the area, to compare previous findings as well as to critique existing findings and suggest further areas for studies. The researcher compared various theories on the measurement of performance of new products in different organisations and sectors and decided upon a holistic approach which combined both financial and non-financial measure of performance as stated by Owee Kowang and Rasli (2011). The use of just financial measures was found to be limiting as aspects such the voice of the

customer, suppliers, technology and competition were seen as necessary elements in the production and measurement of new products.

The third chapter focused on the methodology which was used. The chapter explains the research methodology, research design population sampling technique and sample and the sample instrumentation reliability and validity methods of data collection, data interpretation and analysis. It further clarifies on the method of data analysis, pointing out the reasons for choosing such analytical methods. In summary the research employed different methods of collecting data which included distributed questionnaires, observation as well as interviews in a bid to understand the performance of new products at Cairns Foods Zimbabwe. Consent was obtained from the respondents themselves before engaging them in the research. Reliability and validity were further increased by pretesting the questionnaire. This chapter described the research methodology, including the population, sample, data collection instruments as well as strategies used to ensure that ethical standards, reliability and validity of the study.

The fourth chapter presented and analysed data collected. The chapter presented, analysed, interpreted and discuss the findings from the research. The chapter gives an analysis of the data through the use of tables, pie charts and graphs explaining the results based on the research problem in chapter one. The chapter presented the findings from the data collection process and the results were discussed. It illustrated how data was presented by the researcher, revisited the objectives of the study, data presentation, analysis and interpretation in tandem with the literature reviewed and theoretical framework explained earlier.

The researcher encountered a couple of challenges during the process of trying to put together the research. The challenges encountered are discussed henceforth. Some respondents felt that the information being sought was a bit sensitive hence some participants were not reluctant to express themselves and divulge information about the organisation. The researcher assured the respondents that proper ethical guidelines will be used, and all information gathered will be treated with privacy and confidentiality. Some respondents might not have taken the study seriously and therefore could have possibly give incorrect information. The researcher made follow ups to make sure that all questions are understood and were answered properly. In addition, the researcher also made sure that the participants were informed on the purpose and the significance of the study. It was possible that some respondents may have exaggerated or gave false and inadequate information. In order to obtain reliable information, the researcher tried to convince the participants that the information being sought is of great importance and will in the long run benefit them, their organisation, the manufacturing sector and the nation at large. In obtaining the information, the ideal situation was to interview every member of the target group and come up with a specific sample. However, this was not possible for the researcher because of the sheer size of the task, cost and time involved. As a result the researcher used stratified sampling, and only used participants resident in Harare.

5.3 Conclusions

5.3.1 New Cairns products performance on the market

The research has explored, in depth, performance of new products at Cairns Foods Zimbabwe. Primarily the main objective of this research was to evaluate the performance of new products at Cairns Foods Zimbabwe, and the conclusion is that new products at Cairns Foods are not performing well. Measures used to assess the

performance of Cairns Foods products are quality of products, consumer response to Cairns Foods, shelf off take and rate of return. Based on these indicators, Cairns Foods products are scoring fairly well with a positive remark, save for shelf off take which has majority of the respondents who noted that the off take of Cairns Foods products is poor. Results show that Cairns Foods products have a poor shelf off take. This could be the reason why most of Cairns Foods products are failing on the market. The failure could also be attributable to the fact that most of the new products Cairns Food is launching are not being launched internally to employees before it goes on to the market. Cooper (2007) identified nine possible drivers of performance. These include strategy, process, organizational design, and climate for innovation and four key drivers of performance; namely, a high-quality new product development process that is whether there is one, what it contains and whether it is clearly communicated. These have been identified to have a weighty effect on the ultimate performance of a product. In the absence of the above, a company can develop new products but they will eventually fail on the market.

5.3.2 New product development process at Cairns Foods Zimbabwe

Most respondents noted that there are aware of the existence of the New Product Development process at Cairns Foods. New product development is a defined process of creating a completely new product or service or a new market all together. This implies that particular steps should be taken. Generally, it is a succession of steps that includes the conceptualization, design, development and marketing of newly created or newly rebranded goods or services. Though most employees of Cairns Foods are aware of the existence of the new product development process, few can relate to it. Majority of the Cairns Foods employees are not involved in the product testing before they are launched in the market. In conclusion it can be noticed that even if a company has a

new product development process, if it is not communicated and if the employees do not have a sense of ownership, new product development will be in vein.

5.3.3 Is research being done before engaging in new product development.

Research is being carried mostly by the marketing and Research Development Departments of Cairns Foods. However, findings show that though Cairns Foods products display some form of innovation, they are slightly different from what the market is offering. In addition, Cairns Foods products are perceived to be somewhat innovative from what the market is offering. It can be concluded that Cairns Foods is a follower in the market-place in place of being a leader, offering what its competitors are offering. To lead the market in the competitive markets, Cairns Foods needs to come up with disruptive innovations which will move them from the red ocean into the blue ocean. In addition majority of the employees of Cairns Foods are above 35 years, with a greater part of the employees in the 45 - 54 years bracket, with more that 60% of the employees without a degree or better qualification. It can be concluded that the personnel of Cairns Foods lack certain research skills related to new product development hence the failing of Cairns Foods' products.

5.3.4 To determine the availability of standard procedures manuals for new product development.

Research findings show that Cairns Foods has no standard lead time for a product to be launched into the market. Lead time varies from 1 to 12 months and in some instances it is indefinite. Eyal (2014) adds that new product development research during the last decade has concentrated upon speed and time to market. The implicit, and at times explicit, beliefs are that the rate of technological development is continually increasing, long product development times are not cost effective, markets are changing more rapidly, and market competition is increasing. Majority of the Cairns Foods products

have a lead time of between 1 - 6 months, which could mean two things, either the products are being launched too early without proper research hence rate of failure, or it could mean that Cairns is moving towards best practices.

5.4 Implications

The main objective of the research was to assess the performance of new products at Cairns Foods Zimbabwe using a holistic model that focuses on both financial and non-financial performance measurement constructs that include but are not limited to product level, customer acceptance, market level, financial, and timing measure.

It is necessary to note that the bridge between research and practice takes time to build and that research and practicality must advance in a manner that conjoined. This is imperative in order to bring about transformations in the area of performance management for new products to not only focus on financial measures but to combine with non-financial measures as well. Customer satisfaction is an important element in performance management as they can assist in coming up with areas of improvement as well as adding a competitive advantage. This research allows for organisations in the food manufacturing industry to engage in best practices when it comes to performance management and assessment for the betterment of the organisation.

5.5 Recommendations

In view of the performance of new products at Cairns Foods Zimbabwe on the market, the recommendations that can be drawn are not exhaustive. The following recommendations are based on findings and the above conclusions. In this regard, it is envisaged that;

5.5.1 Investing in Research and Development

In as much as Cairns Foods is carrying out research on new product development before new products are launched, the products are still not performing so well. From findings, the research is being conducted internally by the marketing and Research and Development departments who may not have the requisite, skill, expertise and experience which is needed. In-order for Cairns Foods to produce products which will perform well on the market, it may need to consider investing in Research and Development using external research bodies as well. Recommendation is that they outsource the service to institutions with experience and capacity.

5.5.2 Invest in human capital development and reward innovation by employees

Most of the employees of Cairns Foods are ageing and are limited in terms of exposure. Cairns Foods may need to recruit fresh, young and energetic minds which are techno-savvy. Cairns could also consider investing in training and development programs to ensure that its personnel is moving with times and be able to come up with disruptive innovations which will give Cairns Foods a lead on the market.

5.5.3 Develop a procedure manual for the new product development process

Findings show that half of the time Standard Performance Measures of a new product are not incorporated into a Standard Operating Procedure. This means in some instances procedures followed on new product development are not documented in terms of stages involved. This means some failures are likely to recur in the future if they are not documented. Recommendation is therefore made to develop a procedure manual for the new product development process.

5.5.4 Performance measurement must incorporate both financial and non-financial constructs for greater effectiveness.

There is need to focus performance measurement on both financial and non-financial performance measures. If focus on measurement is solely premised on financial performance measures, which include percentage of sales; profitability; success rate of that specific product; and product life span on the market, among others, certain critical aspects may be overlooked.

5.6 Suggestions for further research

The research focused on performance of new products at Cairns Foods Zimbabwe, which integrates aspects of product performance, the product development process, research and a laid down procedure on how the product development is done. A mix of Cairns Foods employees, management and retail customers was used to appreciate the subject matter under research. The research only focused on employees, management and retail customers of Cairns Foods, there is need for future research which may also consider the ultimate consumers of Cairns Foods.

List of References:

- Aarikka-Stenroos, L., & Sandberg, B. (2012). From new-product development to commercialization through networks. *A Journal of Business Research*, 65(2), pp. 198-206.
- Akpoyomare, L., Adeosun P. K., Ganiyu, R. A, Oghojafor, B. (2012) The Influence of Product Attributes on Consumer Purchase Decision in the Nigerian Food and Beverages Industry: A Study of Lagos Metropolis. *American Journal of Business and Management*. Department of Business Administration, University of Lagos, Lagos State, Nigeria.
- Babbie, E.R. (2011). *The practice of Social research* (12th ed). Belmont, CA: Wadsworth Cengage Learning.
- Booz, J., Allen, P & Hamilton, A. (1982). *New Product Management for the 1980s*. New York: New York Press.
- Brierley, S. (2002). *The advertising handbook*. London: Routledge.
- Cant, M. C., Wiid, J. A.& Kallier, S. (2015). Product Strategy: Factors That Influence Product Strategy Decisions Of SMEs In South Africa. *The Journal of Applied Business Research*: Vol. 31, No. 2, pp. 621-630.
- Carbomell, P., Escudero, A.I.R. & Aleman, J.L.M. (2004). Technology newness and impact of go/no-go criteria on new product success. *Marketing Letters*, 15.
- Cairns Foods Sales reports. (2018). Cairns Foods. Harare.

Chablo, E. (2000). The importance of marketing data intelligence in delivering successful. *CRM. Review*, 3(1), pp. 25-31.

Charles, H. (2007). *International Business Competing in the Global Marketplace*: 6th ed. McGraw-Hill.

Cooper, R.G. & Kleinschmidt, E.J. (2007). *Winning business in product development: the critical success factors. Research and Technology Management*. Retrieved from <https://doi.org/10.1080/08956308.2007.11657441>

Day, G. S. (2007). Is it real? Can we win? Is it worth doing? Managing risk and reward in an innovation portfolio. *A Harvard business review*, 85(12), pp. 110-120.

Dahan, Ely & John R. Hauser. (2003). Product Management: New Product Development and Launching. *A Handbook of Marketing*, pp. 179-222.

Damiyano, D., Muchabaiwa, L., Mushanyuri, B.E. & Chikomba, C.P. (2012). An investigation of Zimbabwe's manufacturing sector competitiveness. *International Journal of Development and Sustainability*, Vol. 1 No. 2, pp. 581–598.

Davies, G. (1990). *Marketing to retailers: a battle for distribution?* A Long Range Planning. 23(6), pp. 101-108.

Fujimoto, T. (2013). Performance Measurement in Product Development Research: A Literature Review. Retrieved from https://www.jstage.jst.go.jp/article/abas/12/4/12_213/_article/-char/ja/.

Hamm, S. (2007). Children of the Web: How the Second-Generation Internet Is Spawning a Global Youth Culture and What Business Can Do to Cash In. *Business Week*, 2(1), pp. 50-57.

Hart, S. (2010). *Product Innovation and Management: Managing Mature Products*. Retrieved from <https://doi.org/10.1002/9781444316568>.

Hauser, J.R & Dahan, E. (2007). *New Product Development Chapter in Marketing Management: Essential Marketing Knowledge and Practice*. Columbus Ohio: McGraw Hill.

Hariprasad, P. (2015). *Performing Competitor Analysis in Product Development*. Retrieved from https://www.researchgate.net/profile/P_Hariprasad

Karim, S. (2009). Business unit reorganization and innovation in new product markets. *Management Science*, vol. 55.

Knight, P. (2018). *Shoe Dog: A Memoir by the Creator of Nike Paperback*. New York :Scribner.

Kotler, P & Armstrong, G. (2011). *Principles of marketing*. 14th edition, New Jersey: Pearson Education.

Levitt, T. (1986) *The Marketing Imagination*. New York: The Free Press.

Mu, J. & Di Benedetto, C. (2011). *Strategic orientations and new product commercialization: mediator, moderator, and interplay*, *R&D Management*, 41(4), pp. 337-359. Retrieved from <https://doi.org/10.1111/j.1467-9310.2011.00650>.

Eyal, N. (2014). *Hooked: How to Build Habit-Forming Products*. USA: Penguin Group.

Pellikka, J. & Virtanen, M. (2009). Problems of commercialization in small technology-based firms. *International Journal Entrepreneurship and Innovation Management* 9(1), pp. 267-84.

Population. (2012) *Office for National Statistics, Online*. Retrieved from <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Population>.

Ritter, T. & Gemünden, HG. (2003). Network competence: its impact on innovation success and its antecedents. *Journal of Business Research* 56(1), pp.745-755.

Trott, P. (2008). *Innovation management and new product development*. New Jersey: Prentice Hall.

Mons Freng, S., Haugland S.A., Grønhaug, K & Hammervoll, T. (2011). Marketing strategy and customer involvement in product development. *European Journal of Marketing, Volume 45*.

Owee Kowang, T & Rasli, A. (2011). *International Conference on Asia Pacific Business Innovation and Technology Management Application of Focus Index in New Product Development*. Published by Elsevier Ltd. Retrieved from www.sciencedirect.com.

Roberto, S., Zanetti, V., Pezzotta, G., & Cavalieri, S. (2017). *The role of technology in designing and delivering Product-service Systems Department of Management Information and Production Engineering University of Bergamo*. Retrieved from DOI: 10.1109/ICE.2017.8280024

Svendsen, M. F. , Haugland, S. A., Gronhaug, K. & Hammervoll, T.(2011). Marketing strategy and customer involvement in product development. *European journal of marketing*. Emerald group publishing limited. Retrieved from <https://www.tib.eu/en/search/id/BLSE%3ARN288569834/Marketing-strategy-and-customer-involvement-in/>

Van de Ven, A.H. (2007). *Engaged Scholarship: A Guide for Organizational and Social Research*. USA: Oxford University Press.

Wind, Y. (1982) *Product Policy*. Reading: Addison-Wesley.

Wilcox, R. R. (2010) *Fundamentals of Modern Statistical Methods: Substantially Improving Power and Accuracy* (2nd ed.). New York: Springer.

Wynstra, F., Van Weele, A.J., & Duysters, G . (2008). *Managing Supplier Involvement in New Product Development: A Multiple-Case Study*. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-5885.2008.00293>.

APPENDIX 1: Consent Letter



“Investing in Africa’s Future”

Informed Consent Letter for Interview

25-March-2018

Dear Sir/Madam

This letter is an invitation to participate in a study I am conducting for my Executive Masters’ in Business Administration at Africa University. The course instructor is Dr S. Murairwa. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

My dissertation is about assessing the performance of new products at Cairns Foods. The project will help me learn more about the topic area and develop skills in research design, collection and analysis of information, and writing a research paper.

Participation in this study is voluntary. It will involve an interview of approximately 10minutes in length to take place in a mutually agreed upon location and time. You may decline to answer any of the interview questions if you so wish. Further, you may decide to withdraw from this study at any time by advising the student researcher. All information you provide is considered completely confidential.

Your name or any other personal identifying information will not appear in the dissertation paper resulting from this study; however, with your permission anonymous quotations may be used. Notes and or tapes collected during this study will be retained in a secure location and then destroyed. Even though I may present the study findings to the class, only the course instructor and I will have access to the data. There are no known or anticipated risks to you or your organisation as a participant in this study.

If you have any questions regarding this study or would like additional information to assist you in reaching a decision about participation, please contact me by e-mail on vivinahmatswetu92@gmail.com. You can also contact my course instructor, Africa University, on e-mail murairwas@africau.edu.

I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Sincerely

Vivinah Matswetu

Dr Murairwa

APPENDIX 2: Consent Form



‘Investing in Africa’s Future’

CONSENT FORM

I have read the information presented in the information letter about a study being conducted by Vivinah Matswetu for an Executive Masters’ in Business Management at Africa University. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted. I am also aware that excerpts from the interview may be included in the course project paper to come from this research, with the understanding that the quotations will be anonymous. I was informed that I may withdraw my consent at any time by advising the student researcher. I was informed that if I have any comments or concerns resulting from my participation in his study, I may contact vivinahmatswetu92@gmail.com or murairwas@africau.edu

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

YES

NO

I agree to have my interview tape recorded.

YES

NO

I agree to the use of anonymous quotations in the course project paper

YES

NO

Participant’s Signature Date

Researcher’s SignatureDate

APPENDIX 3: Questionnaire Survey Instrument



‘Investing in Africa’s Future’

Vivinah B.N Matswetu is an Executive Masters’ in Business Administration student who designed this questionnaire guide as part of academic research on the research topic Assessment of new products performance in Fast Moving Consumers Goods Industry: A case of Cairns Foods Zimbabwe. Your participation in this research is voluntary and your responses will be used specifically for academic purposes only. Your participation in this academic research is greatly appreciated.

SECTION A: DEMOGRAPHICS

Q1. Age: What is your age?

18-24 years old	<input type="checkbox"/>
25-34 years old	<input type="checkbox"/>
35-44 years old	<input type="checkbox"/>
45-54 years old	<input type="checkbox"/>
55-64 years old	<input type="checkbox"/>
65-74 years old	<input type="checkbox"/>
75 years or older	<input type="checkbox"/>

Q2. What is your gender?

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>
Other	<input type="checkbox"/>

Q3. Ethnic origin: Please specify your ethnicity.

White	<input type="checkbox"/>
Black	<input type="checkbox"/>
Other	<input type="checkbox"/>

Q4. Education: What is the highest degree or level of school you have completed?
If currently enrolled, highest degree received.

No schooling completed	<input type="checkbox"/>
Nursery school to 7 th grade	<input type="checkbox"/>
Some high school, no diploma	<input type="checkbox"/>
High school	<input type="checkbox"/>
Some college credit, no degree	<input type="checkbox"/>
Trade/technical/vocational training	<input type="checkbox"/>
Bachelor's degree	<input type="checkbox"/>
Master's degree	<input type="checkbox"/>
Doctorate degree	<input type="checkbox"/>

Q5. Marital Status: What is your marital status?

Single, never married	<input type="checkbox"/>
Married or domestic partnership	<input type="checkbox"/>
Widowed	<input type="checkbox"/>
Divorced	<input type="checkbox"/>
Separated	<input type="checkbox"/>

Q6. Employment Status: Are you currently?

Employed for wages	<input type="checkbox"/>
Self-employed	<input type="checkbox"/>
Out of work and looking for work	<input type="checkbox"/>
Out of work but not currently looking for work	<input type="checkbox"/>
A homemaker	<input type="checkbox"/>
A student	<input type="checkbox"/>

Q7. Which of the following best describes your designation?

Upper Management	<input type="checkbox"/>
Middle Management	<input type="checkbox"/>
Junior Management	<input type="checkbox"/>
Trained professional	<input type="checkbox"/>
Factory worker	<input type="checkbox"/>
Customer	<input type="checkbox"/>

Q8. How are Cairns Foods products performing on the market?

Very Good	<input type="checkbox"/>
Good	<input type="checkbox"/>
Average	<input type="checkbox"/>
Poor	<input type="checkbox"/>
Very poor	<input type="checkbox"/>

Q9. How well do Cairns Food products perform in terms of the following constructs?

KEY: VG – VERY GOOD; SWG – SOMEWHAT GOOD; G – GOOD; P – POOR; VP – VERY POOR

Variable	V G	SWG	G	P	VP
Quality of the products					
Consumer response to Cairns Foods					
Shelf off take					
Rate of return					

Q10. How is the performance of new products measured on at Cairns Foods?

Profit tabulations	<input type="text"/>
Sale off rate	<input type="text"/>
Responses from Consumers	<input type="text"/>
Eagerness of Customers to list product in their stores	<input type="text"/>
As long as it is found in the market it is a success	<input type="text"/>
There is no performance measurement of new products	<input type="text"/>

Q11. Do you know any innovations employed by Cairns Foods?

Yes	<input type="text"/>
No	<input type="text"/>
Note sure	<input type="text"/>

Q12. In your opinion, how different are the innovations employed by Cairns Foods to what is already in the market?

Very different	<input type="text"/>
Slightly different	<input type="text"/>
There is no difference at all	<input type="text"/>

Q13. How innovative do you perceive the product to be

Very innovative	<input type="text"/>
Somewhat innovative	<input type="text"/>
Not innovative at all	<input type="text"/>

Q14. Are you aware of the existence of a New Product Development process at Cairns Foods?

Yes	<input type="text"/>
No	<input type="text"/>
Have never heard of it	

Q15. If Yes, how is the research carried out?

By the Marketing department	<input type="text"/>
-----------------------------	----------------------

By the Research and Development Department

By a Professional research body

All of the above

Other (Please specify).....

If your answer to the above is No, how do you think this affects the success or failure of a new product

.....

.....

.....

If your answer is Yes, may you list the steps below

.....

.....

.....

.....

.....

Q16. Is Research carried out before the launch of a new product at Cairns Foods?

Yes

No

Q17. Are products launched Internally to Cairns Foods employees before they are launched into the market?

Yes

No

.....

.....

.....

.....

Q18. Do you believe an internal launch for new products is necessary? Does it have an impact on the success or failure of new products? (Please explain)

.....

.....

.....

.....

Q19. Is there a standard lead time for a product to land into the market from time of conception to the product being in the shop? (Tick appropriate box)

1-2 months
3-6 months
8-12 months
There is no standard time

Q20. Is there a new product development Standard Operating Practice at Cairns Foods?

Yes
No

Q21. Are there standard performance measures in place for all new products?

Yes
No

Q22. Do these performance measures form an SOP for all new products developed at Cairns Foods ?

.....
.....
.....
.....

CONCLUSION

Apart from what we have discussed, is there anything else that that you would want to share with me which you think might be useful to my research?

.....
.....
.....
.....
.....
.....

PLEASE COMPLETE SURVEY BY:

RETURN TO: VIVINAH B.N MATSWETU

THANK YOU FOR YOUR TIME

APPENDIX 4: Corporate Approval Letter



AFRICA UNIVERSITY

EXECUTIVE MBA PROGRAMME

STUDENT NAME: VIVINAH B.N MATSWETU

Phone: (0772) 221 585. E-Mail: vivinahmatswetu92@gmail.com

05 April 2019

Dear Sir/Madam

RE: Permission for conducting surveys among the staff of Cairns Foods Zimbabwe .

I am a Masters student with Africa University under the supervision of Dr S. Murairwa. My research topic is Performance of new products at Cairns Foods Zimbabwe.

In this regard, I am conducting surveys for data collection amongst the employees of Cairns foods as well as Customers that purchase from Cairns Foods. The main objective of this study is to assess of new products performance and how this affects employees as well as customers.

Therefore, may I request you to kindly grant permission to conduct surveys among your staff via a predesigned questionnaire. See attached. Information provided by your staff will be kept confidential and used for academic purpose only. The questionnaire should take no less than ten minutes.


I await your feedback.

Yours sincerely,

.....
Dr S. Murairwa
Supervisor

.....
Vivinah B.N Matswetu
Research Scholar

APPENDIX 5: AUREC Approval Letter


AFRICA UNIVERSITY
United Methodist Related Institution
VESTING IN AFRICA'S FUTURE

AFRICA UNIVERSITY
RESEARCH ETHICS COMMITTEE (AUREC)

P. BOX 1320, MUTARE, ZIMBABWE • OFF NYANGA ROAD, OLD MUTARE • TEL: (+263-20) 80076/80026/81811 • E-MAIL: aurec@africau.edu • WEBSITE: www.africau.edu

Ref: AU1009/19 26 April, 2019

Vivinah B. N. Matswetu
C/O CBPLG
Africa University
Box 1320
MUTARE

**RE: ASSESSMENT OF NEW PRODUCTS PERFORMANCE IN FAST MOVING CONSUMER GOODS
INDUSTRY: ACASE OF CAIRNS FOOD ZIMBABWE**

Thank you for the above titled proposal that you submitted to the Africa University Research Ethics Committee for review. Please be advised that AUREC has reviewed and approved your application to conduct the above research.

The approval is based on the following.

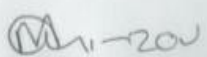
- a) Research proposal
- b) Questionnaires
- c) Informed consent form

- **APPROVAL NUMBER** AUREC1009/19
This number should be used on all correspondences, consent forms, and appropriate documents.
- **AUREC MEETING DATE** NA
- **APPROVAL DATE** April 26, 2019
- **EXPIRATION DATE** April 26, 2020
- **TYPE OF MEETING** Expedited

After the expiration date this research may only continue upon renewal. For purposes of renewal, a progress report on a standard AUREC form should be submitted a month before expiration date.

- **SERIOUS ADVERSE EVENTS** All serious problems having to do with subject safety must be reported to AUREC within 3 working days on standard AUREC form.
- **MODIFICATIONS** Prior AUREC approval is required before implementing any changes in the proposal (including changes in the consent documents)
- **TERMINATION OF STUDY** Upon termination of the study a report has to be submitted to AUREC.

Yours Faithfully


**MARY CHINZOU – A/AUREC RESEARCH ETHICS OFFICER
FOR CHAIRPERSON, AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE**

AFRICA UNIVERSITY
RESEARCH ETHICS COMMITTEE (AUREC)

26 APR 2019

APPROVED
P.O. BOX 1320, MUTARE, ZIMBABWE