# Achieving price pack architecture in South Africa's processed food industry through frugal innovation.

*A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in Strategic Marketing*


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## ABSTRACT

For successful penetration into new markets, organisations should provide consumers with a product solution that is accessible to them and meets their needs, at a price point they are both willing and able to pay, while maintaining the value proposition. This process is known as price pack architecture.

This study investigated whether the constructs of disintermediation and price pack architecture could be integrated to enable businesses to successfully reach the bottom-of-the-pyramid market in South Africa. Several research studies have shown that price pack architecture can be implemented by organisations to extend their reach into new market segments effectively, if all theoretical concepts relating to product, price, and accessibility are applied. However, when it relates to the bottom-of-the-pyramid market, several distribution challenges deter organisations from extending their reach to the lower income market, impeding a successful price pack architecture model. This case-based research study on the processed meat industry demonstrates how the amalgamation of disintermediation and price pack architecture can assist organisations to overcome the barriers to entry that make it difficult for them to sell their products to the bottom-of-the-pyramid market in South Africa. It is proposed that price pack architecture could enable organisations to expand their market reach. However, to achieve successful price pack architecture strategies for the bottom-of-the-pyramid market, disintermediation needs to be incorporated as a constituent factor of price pack architecture.

The research study outlines two key objectives. Firstly, to demonstrate how the application of price pack architecture can aid organisations to effectively extend their reach to the bottom-of-the-pyramid-market by incorporating an additional theoretical construct to overcome the distribution challenges experienced in the processed meat industry. Secondly, to demonstrate the effect of incorporating disintermediation as a component of price pack architecture.

For the purpose of this case study research, internal secondary data from Eskort (Pty) Ltd. was obtained to demonstrate how disintermediation could potentially be used as a strategy for price pack architecture to overcome distribution challenges in the processed meat industry.

A quantitative research paradigm was applied to carry out the study as the researcher needed to identify the conditions and outcomes of integrating the two theoretical constructs of disintermediation and price pack architecture in the attempt to explain how the distribution challenges in the informal retail environment can be overcome.

Secondary data in the form of numerical sales data, distribution analysis and insights that have relevance to the topic of study was collected from the internal resources of Eskort (Pty) Ltd. A quantitative research method and design was used to exemplify the effect of integrating two theoretical constructs to aid organisations in overcoming distribution inefficiencies, by using descriptive research.

For this case research study, the complete population of sales between 2016 and 2019 across all sites in which the sales units were distributed and that were incorporated into the Masakhane project was analysed.

This case study used Microsoft Excel for data entry and data presentation purposes as it provided the descriptive analysis methods required to summarise and graph the data at hand.

*Keywords:* Price pack architecture, disintermediation, frugal innovation, bottom of the pyramid

## Declaration

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# Chapter 1: Introduction and rationale to the study

## 1.1 Introduction

The term "bottom of the pyramid" relates to the bottom tier of the world income pyramid and has become synonymous with developing countries where an informal market constitutes a large portion of their economy (Khalid & Seuring, 2019). Approximately four billion people reside in the bottom tier of the economic pyramid which accounts for 72% of the world's population (Yadavalli & Prinsloo, 2018). Traditionally organisations have predominantly targeted the middle and top tiers of the economic pyramid, which effectively means that more than half of the global population is overlooked by organisations, leading to a massive subset of the population having unserved and unmet needs (Purohit, Paul, & Mishra, 2021). In recent years there has been a growing realisation that the bottom-of-the-pyramid market, that was previously deemed inaccessible and unprofitable, now holds great potential for businesses if they can serve low-income consumers profitably (Gupta, 2020). However, doing business at the base of the pyramid continues to present organisational challenges, as this market has a unique set of characteristics and attributes.

Tapping into this previously unserved market will require of organisations to supply a customised offering to serve the unique needs of this segment (Singh & Das, 2020). Furthermore, businesses should not merely customise their product and services but also extend their efforts to a tailormade offering that encompasses all aspects of the value chain. Organisations operating in the fast-moving consumer goods sector should ascertain that consumer-packaged goods provide consumers with a product solution that is accessible to them and meet their needs, at a price point they are willing and able to pay while maintaining the value proposition, a framework theoretically defined as price pack architecture (Davey & Florio, 2016; Mahmood, Kondis & Stehli, 2014). The price pack architecture business model plays a significant role in aiding businesses to extend opportunities into the informal market, permitting they can apply all of the price pack architecture principles namely product, price, and accessibility (Picciola & Wilson, 2016).

Organisations globally have attempted to reach consumers in emerging markets for many years, with numerous businesses having little success in effectively extending their business into this market. The fundamental reasons for this lack of success relate mainly to external factors that make the bottom of the pyramid a difficult market to access. Distribution into emerging markets is deemed to be one of the major hurdles which prohibit organisations from getting their products into this segment effectively (Kumar & Srivastava, 2020), and which impacts the accessibility pillar of the price pack architecture model. Traditionally in developed markets, organisations depend on formal retailers to distribute their products and get it into the hands of consumers (Sharma, Kumar, & Cosguner, 2019). However, distribution to the emerging market is significantly more challenging than to the established markets. Firstly, emerging markets are made up of small informal retail stores that dominate the rural environments and informal sector. Secondly, emerging markets have to contend with large, underdeveloped infrastructures such as insufficient roads and highways that connect the rural areas to the formal urban economies; and thirdly, the rural environments are geographically dispersed, which makes it difficult for manufacturers to physically reach these consumer environments (Sharma, Kumar, & Cosguner, 2019). With the infrastructural challenges and the areas being far-flung and widely scattered, transportation becomes expensive and challenging, which makes it extremely difficult for businesses to access the informal regions and sales territories through traditional retail distribution channels (Jaqueta, Mashilo, Mocke, & Agigi, 2020).

In South Africa, the majority of the population resides at the bottom of the pyramid. The South African bottom-of-the-pyramid segment consists mainly of an informal retail sector that accumulates approximately R46 billion in annual turnover with over nine million households shopping at these outlets (Yadavalli & Prinsloo, 2018). However, reaching the bottom-of-the-pyramid segment remains a challenge for organisations in South Africa, as the route to market accessibility remains fragmented. Like elsewhere in Africa (Leke et al., 2014 p 90), the distribution models in South African townships involve primary distributors, wholesalers, and an inadequate retail environment made up by spaza shops and informal retail outlets. Research has identified several levels of distribution networks with varying stages and activities that are involved in getting products to the bottom-of-the-pyramid consumers residing in these rural areas. Distribution models include local delivery teams and networks that consist of micro-entrepreneurs acting as local delivery teams that distribute products to the rural townships or to individual consumers, through door-to-door deliveries. While this distribution method enables local economic development through employment of micro-entrepreneurs, the supply chain activities require a substantial amount of training and education (Varga & Rosca, 2019). In some cases, the bottom-of-the-pyramid consumers act as upstream suppliers or downstream distributors. However, this adds additional layers to the distribution channel, leading to many transactions taking place and adding to the transaction costs (Yadavalli & Prinsloo, 2018). Additional distribution channels that rely on partnerships, also referred to as "piggybacking", are applied by manufacturers taking advantage of shared distribution partnerships with organisations that have an established distribution network in emerging markets and rural areas (Caneque & Hart, 2017). In some instances, manufacturers introduce a layered distribution networks approach where they externalise the 'last mile' of distribution to enable them to reach into the bottom-of-the-pyramid segment. The multi-layered distribution approaches bring to light the need for new distribution strategies for bottom-of-the-pyramid manufacturers which would enable them to obtain an equitable share of the supply chain surplus (Sodhi & Tang 2016).

Several literature studies emphasise that organisations seeking success in emerging markets need to adapt their distribution strategies to meet the challenges in these markets (Jaqueta, Mashilo, Mocke, & Agigi, 2020). Companies that wish to engage with the bottom of the pyramid need to consider a completely different business and distribution approach in comparison to other market segments, and require drastic innovations in technology as well as in business models (Campos et al., 2020).

The inadequate infrastructure in rural areas or townships where the majority of the bottom-of-the-pyramid population lives creates a significant barrier to entry for businesses, as they are at present forced to adopt their traditional distribution models and strategies to enable them to reach the informal market (Varga & Rosca, 2019). An analysis of the fragmented distribution channels in the informal trade reveals an opportunity to pursue the possibility of disintermediation strategies. Eliminating intermediaries allows businesses to trade without agents, distributors, or brokers, effectively creating a leaner supply chain to directly access and target the consumer. Organisations continuously work on achieving cost effective solutions and build stronger relationships with customers by targeting them directly. Adopting the links between manufacturer and consumers could enable businesses to link directly to their customers without any intermediaries doing the business (Andersson & Ahlander, 2016).

This research study analysed how the theory of price pack architecture could enable organisations to reach new market segments effectively while considering the distribution challenges and hurdles experienced by the processed meat industry, that essentially causes a significant barrier to entry into the informal market in South Africa. A case study of the processed meat industry in South Africa, using Eskort (Pty) Ltd. as an example illustrates the challenges to reach the bottom-of-the-pyramid market, due to accessibility constraints as a result of distribution inadequacies. Disintermediation removes the middleman from business transactions and by doing so improves the value of an existing product or service. To date, the theory of disintermediation has not been applied using price pack architecture as a construct. The integration of disintermediation as a component of price pack architecture was tested and applied in this research case study, with the aim to determine whether it can be used to overcome distribution challenges in the bottom-of-the-pyramid segment through partnering with external cohorts to overcome the distribution challenges faced in the informal market of South Africa. The context of the study is discussed in section 1.2 which highlights the distribution challenges that prevent organisations from successfully reaching the bottom-of-the-pyramid segment through price pack architecture strategies. The context provides the background to this research.

## 1.2 Context of the study

South African consumers are amongst the most diverse in the world. There are several consumer segments, each with a number of subsegments, all with unique sets of needs. It is crucial that organisations develop a conceptual understanding of what drives these consumers to behave in a certain way, and realise that product innovation will not sustain portfolio growth unless all consumer touch points are considered in product development strategies (Davey & Florio, 2016).

In theory, price pack architecture is a business model which, if adopted successfully, enables organisations to ensure that product development follows a consumer-centric approach, by focusing on delivering a solution to unmet needs and ensuring that the product can reach consumers at a price point they are able and willing to pay (Picciola & Wilson, 2016). However, many organisations do not articulate price pack architecture clearly and do not match it to the coinage denominations which define the daily purchase capabilities of the bottom-of-the-pyramid consumers (Hammond & Prahalad, 2004, cited in Van Woerkom, 2016). While frugal innovation focus on low-cost innovation, it further demands businesses to not solely focus on redeveloping existing products, but to also consider restructuring their production processes and business models to reduce business model complexities in the attempt to make products more available to the bottom-of-the-pyramid segment and in turn improve the living conditions of the impoverished markets (Hyypiä & Khan, (2018). When concurrently looking at frugal innovation it becomes clear why price pack architecture strategies have been unsuccessful, particularly within the bottom-of-the-pyramid consumer segment. Many business models focus on applying traditional-developed-market approaches and frugal innovation strategies in emerging market segments, which results in the organisations over-engineering and over-pricing products for a market consisting of stretched spenders. This approach leads to unsuccessful penetration of a new market due to a misalignment of the segment's needs and the organisation's offering (Winkler, Ulz, Knöbl & Lercher, 2020). It is therefore crucial for businesses to note that enterprise models and strategies vary greatly between emerging markets and developed markets, and that business models cannot live co-dependently between the two markets if frugal innovation is to be a key concept (Mahmood et al., 2014).

Numerous challenges exist when considering extending a business' market reach to the bottom-of-the-pyramid consumer segment, all of which affect the process of attaining price pack architecture. Physical and institutional inadequacies are amongst the most challenging factors to overcome to ensure accessibility of products to this market (Lehikoinen et al., 2018). Organisations need to review and adapt their current value chain models concerning production, packaging, storage, and distribution to ensure a tailormade value chain that enables access to this market (Bendul, Rosca, & Pivovarova, 2017).

The strongest factor affecting product accessibility in the informal market is the issue of institutional voids that are not turned into opportunities, prohibiting manufacturers from connecting effectively with consumers in informal settlements (Mahmood et al., 2014). Route-to-market accessibility into the informal trade world of spaza shops, informal retailers and kiosks in geographically dispersed areas remains a challenge to organisations that do not have an established distribution channel into this market. This lack of access effectively prohibits product accessibility and further affects successful implementation of price pack architecture (Jensen & Zwane, 2010). Many manufacturers rely heavily on retail distribution to meet customer needs and achieve stakeholder value; but organisations face more challenging distribution decisions in the emerging market segment (Sharma, Kumar, & Cosguner, 2019) due to the insufficient retail landscapes which make it difficult to access the informal trade through retail distribution (Cai, Ying, Liu, & Wu, 2019; Sharma et al., 2019). Transportation cost to get consumer goods from the point of manufacturing through the distribution channel, into the hands of the consumers in geographically dispersed markets, further leads to unaffordable pick-up prices for this market, which affects the affordability pillar of achieving successful price pack architecture (Jensen & Zwane, 2010; Sharma et al., 2019).

Very few organisations have direct access to consumers in rural settlements, and as previously mentioned depend on formal retail distribution for getting their products into the hands of these consumers (Lehikoinen et al., 2018). The challenge with accessing consumers solely through retail distribution is that modern trade retailers hold the power of deciding which products they list in store and make available to the consumers, which ultimately limits the consumers' purchasing power when it comes to brand, product selection and variety (Sharma et al., 2019).

Disintermediation strategies could aid organisations to access these consumers directly with a wide selection of products tailored to meet their needs, at a controlled resell cost (Sampson & Fawcett, 2001). The user interface experience depicted in the conceptual model (Figure 1) is a significant contributor to successfully penetrate the emerging market, particularly in the context of convenience and accessibility of products in the informal segments (Hosman & Fife, 2012).

## 1.3 Problem Statement

### 1.3.1 Main Research Problem

Price pack architecture can be applied by organisations to effectively extend their reach into new market segments, if all theoretical constructs relating to product, price, and accessibility are applied. However, when it relates to the bottom-of-the-pyramid market, price pack architecture as a construct on its own does not bear up and there is a need to explore the incorporation of an additional paradigm into the theory to enable the processed meat industry to achieve a successful price pack architecture strategy to reach the base of the pyramid.

### 1.3.2 Sub Research Problem

Baring the bottom-of-the-pyramid market several experts and scholars maintain that the major factor preventing organisations from successfully applying price pack architecture, is the distribution challenges resulting from restricted route-to-market accessibility (Streb & Janse, 2017).

There is a need to assess the incorporation of disintermediation as a component of price pack architecture, to enable the processed meat industry to overcome the barriers to entry and reach the bottom-of-the-pyramid segment effectively.

## 1.4 Purpose of the study

The purpose of this quantitative research study is to integrate two theoretical literatures, namely price pack architecture and disintermediation, to address the distribution challenges faced by the processed meat industry attempting to reach the bottom-of-the-pyramid segment that resides in the townships of South Africa. By conducting a case study and providing descriptive evidence, the current investigation aims to suggest how this can effectively be achieved. The case study will provide descriptive evidence of how the application of price pack architecture can aid Eskort (Pty) Ltd to expand their market reach to previously untapped markets. Although several studies have described the successful application of price pack architecture in developed markets, the bottom-of-the-pyramid segment requires organisations to incorporate an additional theoretical construct to overcome the distribution challenges impeding successful price pack architecture strategies. The case study provides descriptive evidence that the distribution gap can be addressed by applying frugal innovation through incorporating the theory of disintermediation as a pillar of price pack architecture. Applying disintermediation enables businesses to create a leaner supply chain, through affiliations with distribution partners that have direct access to the bottom end consumer market. The information garnered consists of raw sales data obtained from Eskort (Pty) Ltd, showing the sales variance and geographical reach after embarking on a distribution partnership and joint venture with Clover South Africa.

## 1.5 Research objectives

This research paper is based on a case study intended to demonstrate the relationship between disintermediation and price pack architecture, to overcome the distribution challenges faced by the processed meat industry attempting to reach the bottom-of-the-pyramid market. The incorporation of disintermediation as a component of price pack architecture is demonstrated through a case study of the processed meat industry in South Africa, using Eskort (Pty) Ltd. as an example.

### 1.5.1 Primary Research Objective

The primary objective of the research study is to demonstrate how the application of price pack architecture can aid organisations to effectively extend their reach into new markets. The bottom-of-the-pyramid market requires the incorporation of an additional theoretical construct to overcome the distribution challenges impeding a successful price pack architecture strategy which is explored in this case research study.

### 1.5.2 Secondary Research Objective

The secondary objective of this case study is to demonstrate the effect of incorporating disintermediation as a component of price pack architecture. The amalgamation of the two theories is intended to illustrate how organisations in the processed meat industry can overcome distribution challenges experienced in the rural townships of South Africa, and constructively apply all principles relating to price pack architecture.

### 1.6 Research questions

Based on the objectives stated in the preceding paragraph, and using a case study from the processed meat industry in South Africa, the main research question has been formulated as follows:

#### 1.6.1 Main Research Question:

How can the theory of price pack architecture enable the processed meat industry to reach new market segments effectively?

#### 1.6.2 Research Sub-Question 1:

What are the outcomes of applying frugal innovation in the form of disintermediation as a part of price pack architecture strategies in the processed meat industry in South Africa?

### 1.7 Justification for the study

The research study delivers certain contributions to marketing theory and practice in South Africa. Firstly, the research demonstrates how an enhanced theory of price pack architecture can enable businesses to reach new market segments effectively. When it comes to the bottom-of-the-pyramid market segment, price pack architecture on its own is not deemed viable to reach this segment.

Secondly, the case research provides descriptive evidence as to how the incorporation of disintermediation as a component of price pack architecture can effectively bridge a distribution gap faced by an organisation in the processed meat industry in South Africa attempting to reach the bottom-of-the-pyramid market.

Limited research has been conducted around the integration of the theoretical constructs of price pack architecture and disintermediation. This study contributes to closing this gap. Price pack architecture and disintermediation are amalgamated to overcome the distribution challenges faced in the bottom-of-the-pyramid market in South Africa. The incorporation of disintermediation as a component of price pack architecture is believed to enable organisations to successfully reach the bottom-of-the-pyramid segment.

A number of research studies have been conducted on the constraints of tapping into the base-of-the-pyramid consumer market. Some studies focused on supply chain models tailored to reach the informal trade through distribution partnerships in the form of retailers and wholesalers; some make mention of how bottom end consumers can become micro-entrepreneurs to get products into the hands of the end users in the informal settlements; but no research has been conducted on the amalgamation of theoretical constructs to create a leaner supply chain to reach the bottom-of-the-pyramid consumers residing in the rural townships of South Africa.

## 1.8 Significance of the study

The significance of this study is that it will be relevant to future researchers attempting to determine whether the incorporation of disintermediation strategies as a component of price pack architecture can overcome the distribution challenges experienced by organisations attempting to extend their reach into the bottom-of-the-pyramid segment of South Africa.

This research project focused on gaining insight into how the integration of two theoretical literatures namely price pack architecture and disintermediation can address a distribution problem experienced by organisations attempting to extend their reach into the bottom-of-the-pyramid market segment in the rural townships of South Africa.

## 1.9 Delimitations of the study

- This study focused on organisations operating in the fast-moving consumer goods industry, with a particular focus on the processed meat industry in South Africa.

- This study considered but did not include data for the period of 2020 during the COVID 19 pandemic. This was to allow a comparable research period for the research study.
- The study focused on eight main product categories in the processed meat industry, which include Bacon, Ham and Cured Meats, Polonies, Ribs, Russians, Viennas and Spreads.
- The research study focused on sales insight across four main geographical regions (Western Cape, KwaZulu Natal, Gauteng and Eastern Cape).

## 1.10 Definition of terms

- **Price Pack Architecture** – Price Pack Architecture (PPA) is defined as an all-encompassing innovation model to ensure that a viable selection of products is developed on the basis of satisfying an unmet need, while ensuring that the products are accessible to the intended market and that the targeted market can easily obtain the products at a price they are both willing and able to pay (Davey & Florio, 2016).
- **Frugal Innovation** – Innovations may be said to be frugal if they simultaneously meet the criteria of "*substantial cost reduction*, *concentration on core functionalities*, and *optimised performance level"* (Weyrauch & Herstatt, 2016). Frugal innovation is defined as delivering best customer value (Radjou & Prabhu, 2015) through lowering the pickup prices in the attempt to serve the bottom end consumer market where consumers have unmet needs and simultaneously expand their geographic reach into market segments previously untapped (Rocca, 2016). Some studies allude to frugal innovation as being product specific while other studies identify frugal innovation as process driven (Brem & Wolfram, 2014).A large portion of research studies define the concept of frugal innovation as a cluster of product innovation, processes, and business models, arguing that the term can be applied to the production aspect as well as the output of a product (Rocca, 2016).

  In the context of this research study frugal innovation is defined as the simplification of processes by removing nonessential factors from the value chain, more specifically, elimination of intermediaries to effectively reach the informal trade directly.

- **Disintermediation** – is defined as the process of eliminating or excluding intermediaries from the supply chain, to create a leaner distribution model (Sampson & Fawcett, 2001).
- **Bottom of the pyramid** – Bottom-of-the-pyramid consumers are defined as consumers residing in the bottom tiers of the economic pyramid, facing strenuous, poverty-stricken conditions daily. This segment of the population has limited daily disposable income and faces a lack of sufficient resources confining them to the basic requirements for survival (Bustrup, 2007).
- **Food service industry (FSI) -** The food service industry in the context of this research paper describes the establishments that serve ready-to-eat food to people outside their homes. The food service industry cluster in this paper includes restaurants, takeaway shops, cafeterias, tuck shops, catering establishments, hotels, and taverns (Sirsat, 2021).
- General Trade: The General Trade referred to in this study consists of small scale businesses targeting consumers who engage in small quantity day to day purchases. These establishments generally occur in the form of spaza shops and informal trade vendors selling Eskort products in their original form to consumers (Wegerif, 2020).
- **Informal Trade:** The informal trade in this research study refers to non-traditional retail stores, such as spaza shops, trading vendors and kiosks, situated in rural areas, serving and selling mainly to the bottom-of-the-pyramid consumers in South Africa, (Sassen, Galvaan, & Duncan, 2018).
- **Masakhane**: The Masakhane project is a distribution network implemented by Clover South Africa and jointly by multiple South African brands, including Eskort (Pty) Ltd. It was established in 2012 with the purpose and intent of penetrating the informal market and rural developments of South Africa. The concept was formulated by focusing on product development in pack sizes resonating with the needs of the informal market at affordable price points through a distribution channel that enables brands to directly reach the informal retail environment, a market previously untapped (J. Richter, personal communication, March 15, 2020).

## 1.11 Assumptions

The assumptions that have been made relative to this study are as follows:

- The researcher will be accessing factual data and information from the database of Eskort (Pty) Ltd. and there is no conflict of interest.
- The principles are objective, factual and unbiased.

  The positionality of the researcher refers to the personal position of the researcher that has the potential of influencing the research study and reflects the position that the researcher has chosen to adopt within a given research study (Darwin Holmes, 2020). In the context of this research study the researcher has a direct affiliation with the organisation under study. As an employee of Eskort (Pty) Ltd. the researcher is aware of the cause and effect of applying disintermediation as a factor of price pack architecture which has been applied as a strategy to overcome distribution inefficiencies in the informal retail environment in South Africa. The researcher has been part of distribution projects through the Masakhane channel that enabled the organisation to overcome the distribution gap experienced by the processed meat industry. The researcher therefore aims to demonstrate the effect of integrating the two theoretical constructs through descriptive research to contribute to future research studies aiming to study the distribution challenges experienced in the informal and rural townships of South Africa.

The chapters to follow are:

Chapter 2 - reviews extensive literature on the theories relating to the bottom-of-the-pyramid segment, price pack architecture, disintermediation, and frugal innovation, to identify how these constructs can aid organisations to apply price pack architecture in order to overcome distribution challenges.

Chapter 3 - discusses the research methodology which includes the procedures and techniques used to identify and analyse the information relating to this case research study.

Chapter 4 - reports the findings of the case research study based on the information garnered using the methodology in Chapter 3.

Chapter 5 - interprets and describes the significance of the case research findings while explaining the insights which emerged as the result of the case study research.

Chapter 6 - summarizes the outcomes of the case research study while acknowledging the limitations and providing recommendation for future research.

# Chapter 2: Literature Review

## 2.1 Introduction

The various core theories, concepts, and variables utilised in this study have been tested, discussed, and employed by several researchers and theorists. This chapter will present the literature review based on the conceptual model shown in Figure 1 (Appendix D). In the current study, the researcher argued that product innovation, designed to cater to the needs of a particular consumer segment, supported by a pricing strategy which that segment is willing and able to pay, while ensuring accessibility of the product, can help an organisation to penetrate a previously untapped market effectively. In the context of this research study, the untapped market will refer to the informal retail environment in rural settlements where the majority of the bottom-of-the-pyramid consumers in South Africa purchase their day-to-day consumable goods. With reference to the price pack architecture theory and in particular the theory around product accessibility, the researcher further attempted to explore how the adoption of frugal innovation in the form of disintermediation could be applied as a constituent construct of price pack architecture to enable organisations to extend their distribution to the bottom-of-the-pyramid consumers of South Africa.

Taking into account the scope of the study as illustrated in section 1.2, the literature review followed a channelled process of understanding previous research conducted around the application of price pack architecture applied to reach previously untapped and unreached markets. The bottom-of-the-pyramid market segment in South Africa was analysed, first to determine the market antecedents, and secondly to define the challenges faced by the market as a result of inaccessibility to many product offerings. The relationship between price pack architecture and disintermediation was further reviewed to establish how these business models could jointly support market expansion into the informal trade.

## 2.2 Bottom-of-the-pyramid (BOP) market

Bottom-of-the-pyramid consumers are defined as consumers residing in the bottom tiers of the economic pyramid, facing strenuous poverty-stricken conditions daily, earning an income less than the basic poverty income earnings (Oodith & Parumasar, 2017). This segment faces a lack of sufficient resources, which confines them to the basic requirements for survival. Income inequality is a pervasive challenge faced globally but particularly in developing countries where the bottom-of-the-pyramid population mostly resides. These countries are characterised by extreme poverty and emphasis should be placed firstly on meeting basic needs before this segment can be classified as a profitable market (Jaiswal, 2008)

The consumer landscape of South Africa reveals a heterogeneous consumer market across the country. The South African consumer landscape can be identified as equivocal, as consumer demands vary vastly across all segments (Davey & Florio, 2016). Viewed through the lens of the economic pyramid, the bottom end of the South African consumer landscape represents between 60% and 70% of the total population (Lappeman, Zornitta & Mowzer, 2020). This group of people, representing a third of the total South African population, is accountable for a significant portion of the overall purchasing power. Studies indicate that the areas in South Africa with the highest population density are also known to be the regions where most of the bottom-of-the-pyramid market resides (Yadavalli & Prinsloo, 2018).

South Africa is deemed to have a distinctive combination of a third and first world economy, with an immense gap between wealthy and poor consumers even though they reside in close proximity to one another, with only a few kilometres between some of the wealthiest suburbs and poorest townships (Jensen & Zwane 2010). While there is a small geographical gap between the wealthy and poor, the bottom-of-the-pyramid consumers experience a complete disconnect from the formal economy. This is mainly the result of the inadequate infrastructure which prohibits manufacturers and business from successfully reaching this informal retail landscape and leads to the economic exclusion of this segment (David-West, Ihenachor & Umukoro 2019).

Research has established that the vast majority of consumer spend lies within the informal retail trade, where consumers generally purchase their day-to-day goods from informal roadside markets and spaza shops. Nonetheless, the informal market continues to be overlooked by many organisations (Signé, 2018).

This untapped market holds great potential for brands to extend their reach beyond the wealthy and middle class, as the bulk of the South African population resides in the lower income space. The opportunities within this segment nevertheless pose challenges for many brands, due to the unique market characteristics and consumer antecedents which are dissimilar to those in developed markets in terms of their income, buying behaviour, and savings potential. For brands to successfully tap into this market and win over this consumer, they need to understand this market's reason for existing, then construct a tailormade business model to provide customized products, ensure that they remain highly relevant to this market, address the specific needs, and find innovative ways to catch the attention of this market while creating value (Gwewera, 2019). To grab the attention of this market, businesses need to acknowledge that marketing activities and business models cannot be identical across the different economic tiers, as conventional strategies may not return the desired results in the informal trade as it would in developed markets. In order to develop a successful marketing strategy and to penetrate this market, businesses need to acknowledge the core physiognomies of emerging markets. These have been identified as market heterogeneity, resources, and infrastructure deficiencies. These physiognomies force marketers to adapt traditional marketing efforts to target the informal market, a challenge confronting many organisations. These challenges generally come to light as a result of businesses lacking sufficient market insights and a clear apprehension of this market, which effectively prohibits them from successfully adapting their conventional marketing strategies to a marketing strategy that directly speaks to this segment (Kumar, Sunder & Sharma,2014).

For businesses to extend their market reach and obtain brand visibility in the informal sector they need to fully comprehend the informal retail environment, which consist of multiple independently owned stores generally referred to in South Africa as spaza shops and street vendors. These traders stock a very selective and limited product range, mainly because businesses do not have access to the informal retail environment as a result of the insufficient distribution landscape, which prohibits brands from directly reaching the retail trade. The distribution inefficiencies force businesses to depend on local intermediaries to get their brands into these informal retail outlets, thereby creating multiple levels in the distribution network in order to bring products to the end consumer (Varga & Rosca, 2019).

Previous studies investigated the distribution challenges faced by businesses attempting to serve the informal market while maintaining profitability. Applying unique distribution systems that cater specifically to the bottom-of-the-pyramid consumer segment was found to promise significant growth, far exceeding the growth of the mature established markets, simply through streamlining focus and understanding the consumer values and needs of this market (Davidson, 2009). It is argued that organisations can effectively expand their market reach to target the lower income consumer segment by simply developing sustainable products that cater for this particular target audience, through being innovative in their approach, and by adapting their business models to cater for the realities in the lower income markets (Borchardt, Ndubisi, Jabbour, Grebinevych, & Pereira, 2020).

The complex landscape, wide spatial distribution, and route-to-market distribution complexities prohibiting brands from reaching the lower-end market have a major knock-on effect on the bottom-of-the-pyramid consumers. The reality is that the lower-end consumer generally purchases low quality products at high prices mainly because of competition being low and organisations failing to target this market, ultimately restricting these consumers' purchasing power. Bottom-of-the-pyramid consumers have multiple unmet needs and most households residing in informal settlements lack adequate basic services and access to an ample selection of consumable items because they are geographically dispersed. The widespread geographical areas pose as major barrier to entry for many businesses, and result in businesses not being able to reach this market directly which in turn leads to businesses becoming more dependent on local partners to facilitate entry to market. It is argued that organisations can bridge these gaps by introducing innovative business models and establishing local partnerships and distribution channels that have matching capabilities to tap into the base of the pyramid (Shukla & Bairiganjan, 2011). Expenditure on consumer goods, predominantly food and beverage followed by clothing, furniture, and personal care items, represents 55% of bottom-of-the-pyramid household spend. Although several national and international suppliers have already invested in this market, opportunity still exists particularly in the bottom-of-the-pyramid food market where higher quality, low-priced food staples are highly in demand (Jensen and Zwane 2010).

A close look at the conceptual model implemented in this research study (Figure 1, Appendix D) reveals that value proposition is the first pillar of consideration in this particular context of study. With reference to the bottom-of-the-pyramid consumers, value proposition relates to the value sentiment this market attaches to a product or service. Customers express a consistent willingness to pay for a certain product, arguing they could afford the product whilst facing the pressure of poverty-stricken conditions. Value proposition is further broken down into two components: value creation and value substitution. Resource deprived environments relate directly to either “value creation” through product innovations, which focus on delivering value that satisfy previously overseen and unmet needs, or “value substitution" that focuses on adding alternative qualities to existing products or services. Considering the limited buying power of the bottom-of-the-pyramid consumers, creative product innovation is a key element to successfully penetrate the informal segment (Hosman & Fife, 2012). A holistic review of the unique attributes of the bottom of the pyramid, however, reveals that innovation opportunity extends far beyond a product-centric approach but rather places emphasis on the all-encompassing business model which enables businesses to innovate and subsequently translate innovation into sales through successfully getting the products into the hands of this geographically dispersed market in South Africa (Prahalad 2012).

### 2.2.1 Distribution into the informal trade

Penetrating the South African informal market is challenging and has been attempted with little success by many businesses. Although Shoprite, a South African retailer, has seen a substantial growth in their sales into the Nigerian market, this was partially due to a significant investment in infrastructure to aid them in effectively penetrating the market. Other than investing in infrastructure in informal markets to help businesses reach the bottom of the pyramid, organisations are hard pressed to find lucrative ways to serve the informal trade. Several studies have addressed the challenges involved in serving the informal markets, but few studies have addressed the particular distribution challenges faced by organisations when they attempt to penetrate these markets. The challenge lies in the facilitation of retail activities in the informal trade, which are mainly dominated by informal market structures. This poses a significant challenge to organisations that use formal structures for the distribution of products. Traditional supply chain models are not considered profitable for the bottom-of-the-pyramid segment mainly because the members of this population typically serve either as upstream suppliers of goods and services or as downstream distributors of finished goods, leading to several small transactions in order to get products into the hands of the consumers. While traditional supply chain models are deemed a profitable solution in established markets, this route-to-market channel translates to high transaction costs and trading becomes cost-ineffective to the informal trade, pushing businesses to innovate the way they operate their supply chains to target the bottom-of-the-pyramid segment (Sodhi & Tang, 2016). Poverty stricken consumers residing in the lower tiers of the economic pyramid lack market power, a fact which could encourage organisations to adapt their distribution processes to obtain an equitable portion of the supply chain in an attempt to gain profit while alleviating poverty conditions. Understanding the challenges in informal markets should be the first line of thought for organisations looking to serve bottom-of-the-pyramid consumers in the informal market (Jacquetta, Mashilo, Mocke & Agigi, 2020).

Research has found that modern retail has traditionally been the dominant channel of distribution for most manufacturers, but at present this is rapidly changing as the informal retail trade is becoming a bigger player in the distribution network. Most businesses depend on the modern retail trade to distribute their products to the base of the pyramid, but researchers are suggesting that businesses start exploring more inclusive business models by introducing alternative distribution channels to start integrating local communities and the informal trade in their value chain. This is particularly important as the supply chain in informal markets consists of primary distributors, small scale wholesalers, and finally the fragmented retail environment, which is made up of spaza shops and street vendors. In the modern trade, brands generally have a direct contractual affiliation with the primary distributors but hold little control over the remainder of the distribution channel (Mtsemala, 2014). In South Africa, an informal market distribution network provides the informal trade with a convenient way of obtaining resources to resell. However, this still poses many challenges as spaza shop owners are still limited to a selection of brands and products available in the distribution network's offering (Jensen & Zwane, 2010).

Concerning the supply chain and distribution network in the informal sector of South Africa, local spaza shop and small informal business owners purchase consumer goods from the local informal distribution networks. The distribution network accumulates consumer goods in large quantities from manufacturers or wholesalers and redistributes them to smaller businesses. However, this form of trade marketing activity often means several restrictions and limitations for brands wanting to reach this segment. The main challenge lies in the fact that manufacturers have no control over promotional activities, credit, and financial opportunities to match the consumers' ability to product pricing requirements and after sales services. Manufacturers are often restricted from tracing sales insights on informal retail transactions, regulating the product quality or retrieving insights into the bottom-of-the-pyramid consumer's buying behaviour and shopping patterns for research purposes (Shukla & Bairiganjan, 2011).

The route-to-market channel in the informal trade relies on spaza shop owners sending runners to allocate stock from the informal distribution centres which act as the interface between the manufacturers, the distribution network, and the informal retail outlets. This form of route to market has raised several other challenges for informal retail owners. Firstly, the inadequate infrastructure at store level restricts spaza shop owners from bulk buying and taking advantage of relatively nominal bulk-pricing benefits. Furthermore the high risk associated with storing large stock quantities exposes store owners to threats of theft and loss of assets, and lastly manufacturers have no influence on the decisions of spaza shop owners and what stock they keep in their outlet stores. These challenges demonstrate the importance of manufacturers having a direct link to the informal retail landscape in order to service the stores and outlets regularly through a dedicated sales force (Jensen & Zwane, 2010).

Modernising the informal trade is a crucial step to unlocking economic welfare for the low-income population and elevating the conditions in the informal retail environment along with the communities in which they operate. Efforts to support the informal retailers have mainly been unsuccessful in addressing the informal retail space holistically and businesses struggle to address the needs of both the informal retailers and their consumers while ensuring value to stakeholders (Langford, Gleek & Van Wyk, 2019)

Considering the bottom-of-the-pyramid consumer market, and the challenges highlighted in the preceding paragraphs, it may be concluded that the base of the pyramid predominantly resides in informal townships and rural areas which are generally infrastructurally marginalised, with limited disposable income, bringing to light the importance of and dire need for frugal innovation. Organisations need to shift their focus to become more consumer-centric by innovating and delivering products that meet the desires of the lower income markets, at price points they are willing and able to pay, while ensuring the products are made accessible (Gwewera, 2019).

The next section discusses how a price pack architecture business model puts the focus on creating specific products that meet the needs of a particular segment, ensures affordability, and establishes availability to effectively reach new market segments.

## 2.3 Price Pack Architecture (PPA)

Price pack architecture offers organisations several proven benefits to aid them in maintaining momentum in the face of evolving consumer trends and overall market challenges, particularly those in the bottom-of-the-pyramid segment (Picciola & Wilson, 2016). Price pack architecture is defined as a strategic business model that enables organisations to provide consumers with a viable selection of products that are tailored to meet their respective demands at a price they are willing and able to pay, ensuring accessibility to those products, while simultaneously driving portfolio growth and enhancing value proposition (Davey & Florio, 2016).

Taking into consideration the market antecedent of the base of the pyramid and the challenges this market faces relating to product availability, affordability, and accessibility, price pack architecture is a particularly relevant topic in the lower-end market where consumers are cash strapped, price sensitive, have limited disposable income, and are driven by value with each purchase decision. The price pack architecture business model plays a significant role in aiding businesses to extend opportunities into the informal market (Picciola & Wilson, 2016).

With the tough economic landscape, businesses are finding it difficult to drive consumption and deliver value for money amongst cash strapped consumers. This is particularly relevant in the bottom-of-the-pyramid consumer market in South Africa where the market is characterised by a unique set of attributes and shoppers can be described as having limited daily disposable income, lacking storage capacity due to the living conditions in townships, and having to balance their daily spend to accommodate for several daily-need categories or shopping items. As consumers in this market are inclined to buy less in total, it can be argued that price pack architecture offers manufacturers a sustainable way to maintain the balance between volume and value by offering consumers the opportunity to buy brands in smaller pack sizes while brands have the opportunity to remain part of consumers' shopping baskets even if it is on a smaller scale (Udasi, Gupta & Kanchan, 2017). Consumers seek authenticity and are more inclined to purchase brands that offer safety and reassurance. Cash strapped consumers are more likely to purchase brands they trust, particularly in tough economic conditions where the risk is high when a wrong purchase decision is made. Manufacturers need to consider the risk factor associated with purchase decisions in the bottom-of-the-pyramid consumer market and ensure that their innovations to the lower income market present an affordable and relevant product for in-home occasions (Turnbull, 2020). The economic slowdown pushes many consumers into a survivor-shopper mind frame, which leads to consumers being driven by value proposition as their Rands and cents become less plentiful. Brands are forced to consider the different needs and consumption occasions of their products for each respective consumer segment, which drives organisations to ensure that product innovations satisfy the need for different pack sizes, while ensuring that their products are available and accessible at every shopping occasion (Sadeed, 2016).

The emergence of price pack architecture (PPA) affords businesses the opportunity to construct business models and adapt innovations based on their respective consumer groups' needs across all segments. Price pack architecture (PPA) provides brands with the opportunity to successfully identify pricing models that satisfy consumer groups across all channels while developing product innovations in pack sizes that cater to the need of each respective consumer group in the target market. Price pack architecture emphasises that product enhancements enable organisations to attract consumer groups who previously remained outside of the core customer base, to gain market share, and to grow the category (Picciola & Wilson, 2016).

While organisations have been struggling for many years to successfully penetrate the informal market, studies suggest that t the adoption of adequately articulated price pack architecture strategies can allow brands to bridge the gap into an unserved market. Organisations attempting to adopt this business model to target the very poor need to align their product innovation strategy with three governing factors.  Firstly, it is essential to ensure that the product offering has a functional purpose to the market at hand. Studies have noted that many organisations failed in their attempt to target the base of the pyramid mainly as a result of targeting the bottom end market with products developed for the established markets which serve no purpose or functionality to the base of the pyramid in their original form. Secondly, it is important to ensure that innovation is affordable to the lower-end market. The base-of-the-pyramid consumer is defined as impoverished with limited disposable income, and it is crucial that organisations adapt operations throughout the entire value chain to make products financially attainable to this market. Thirdly, products need to be made easily available and accessible to consumers who are disconnected from the formal trade. Product availability and accessibility are key criteria to a successful price pack architecture strategy, particularly when working with the geographically dispersed markets where the base-of-the-pyramid consumers reside in South Africa. Efficiency distribution to the lower income market is the greatest challenge for many organisations that are working towards expanding their existing market reach to connect with the informal trade (Streb & Janse, 2017). The rise in the competitive intensity across product forms in retail channels within the informal market segment forces manufacturers to adapt their retail distribution strategies to fit with the developing markets dynamics. It is the only way to ensure successful reach into emerging economies and accessibility to their products (Sharma et al., 2019).

The implementation of a multistage process allows organisations to serve a multi-layered function and meet the need of consumers across multiple segments. The 4A's business model applied and dissected by Lehikoinen et al. (2017) can be integrated to help organisations achieve price pack architecture to reach the lower income consumers residing in the bottom-of-the-pyramid market.

1. *Availability* - The extent to which consumers can acquire and use a particular product. Availability is a particularly challenging concept in bottom-of-the-pyramid markets due to the inadequate state of infrastructure. It underscores the importance of developing special supply chains to obtain access to geographically dispersed areas. Organisations should attempt to establish effective and efficient distribution strategies that will enable them to get their products to the geographically isolated segments while maintaining a low distribution cost (Lehikoinen et al., 2017). In their attempt to create brand equity, organisations should ensure an uninterrupted route-to-market approach to guarantee accessibility of products to consumers (Prahalad, 2012).
2. *Affordability* – A consumer's capability and willingness to purchase a product at a certain price. Affordability remains a core challenge faced by many organisations as they struggle to find the balance of supplying high quality products at affordable pick-up prices, the more so when working with the base of the pyramid which is particularly price sensitive, impoverished, and has limited daily spend. Pricing in this market should be carefully articulated to ensure sell through. Failing to provide an affordable pick-up price will lead to product launch failure purely due to unattainability from a pricing perspective.
3. *Acceptability* – Acceptability refers to how receptive consumers are to a product and how well it meets their expectations. Acceptability can be influenced by both internal and external factors, and it is critical for businesses to understand the market in its entirety when developing products for the base of the pyramid. Failure to understand the market will lead to unsuccessful product innovations purely due to misalignment of consumers' expectations and organisation's product intent.

4. *Awareness* - Promoting awareness is crucial to ensure consumers have knowledge of product availability in the market, what is on offer and how to utilise the specific product features. Tailoring communication channels to each segment is important, as consumers' receptiveness to communication will vary between target markets. Availability of products strongly impacts awareness, as consumers need to be exposed to products in order to be aware of the offering and to be driven to consumption (Lehikoinen et al., 2017).

Considering these research-based statements, it can be argued that products existing in established markets will not deliver the same success in the bottom-of-the-pyramid market segment. Firms need to conceptualise the fact that products need to be adapted to the extent that they serve a purpose in the lower-end market, and work towards the principle of balancing global standards with local market responsiveness while ensuring that products developed for the lower-end market are easily accessible and attainable by the customer.

The challenges relating to accessibility into the informal retail environment have been experienced at first hand by Eskort (Pty) Ltd. The inadequate distribution landscape and impossibility of directly accessing the spaza-shop retail environment posed a major challenge to tapping into the largest consumer base in South Africa. A lack of distribution capabilities in these informal settlements resulted in Eskort distributing products into the informal retail environment with little success. The need for products from the processed meat industry is high amongst these consumers and while it is relatively easy to implement price pack architecture models that focus on manufacturing products that resonate with this market's needs, in pack sizes that are adapted to serve their demand, distribution into the market remains a challenge and has a significant impact on the feasibility of achieving an all-encompassing price pack architecture model. To get products into the informal retail landscape of South Africa, manufacturers depend on listing products in the modern trade which is situated within close proximity of the townships in the hope of penetrating the lower income segment. Brands such as Eskort that have no direct distribution channel into the informal trade depend on modern trade listings to get their products into the hands of the consumers residing in the informal settlements. Having no direct route to market into the informal trade ultimately leaves organisations with restricted control of product placement in the spaza shops and food service customer segments (J. Richter, personal communication, March 15, 2020).

The following section discusses disintermediation and how the construct can be integrated as a component of price pack architecture to address the distribution challenges faced by manufactures attempting to bridge the accessibility gap of products in the informal trade to reach the bottom-of-the-pyramid market.

## 2.4 Disintermediation

Distribution is described in marketing literature as the process of making a product or service available for the consumer. It hinges on the channels that make products accessible to the consumer who needs it. The bottom-of-the-pyramid consumers generally reside in remote villages and informal settlements which are inadequately connected to the formal economy and developed areas, and this often means a physical barrier to entry into the informal trade for many businesses. The disconnected retail landscape faces several distribution challenges which affect the flow of products both into and out of the informal settlements. However, research notes that the reinvention of distribution channels could help businesses to bridge this gap. Reinventing the route-to-market channels increases access through innovation, by identifying unconventional ways of reaching rural consumers and getting manufacturer's products into the informal market. Overcoming the barriers to entry can be achievable when applying differential distribution systems and identifying distribution activities that can be outsourced to reduce the costs, and by applying disintermediation strategies (Vachani & Smith, 2008).

Research studies have reported that a clear disconnect exists in the supply chain management at the base of the pyramid, and point out that implementation of effective value chain models can essentially aid organisations in achieving sustainable goals (Gold, Hahn & Seuring, 2013). Limited research has been conducted on effective distributions strategies to conduct business with the bottom-of-the-pyramid consumer market and on applying disintermediation strategies. Studies have indicated that developing countries face the challenge of inadequate infrastructure in the informal market segment, resulting in restricted access to the bottom-end consumers. The bottom-end consumer market cannot be reached through conventional approaches, and efforts to access the informal market often result in an influx of transaction costs ultimately alienating bottom-of-the-pyramid consumers from many businesses. Traditional supply chain strategies for consumer goods are likely to fail in the informal sector due to the physical links to market being vastly different to those in the established market, the local informal stores being cash strapped, and the lack of market power in the informal trade (Sodhi & Tang 2016).

Traditionally manufacturers rely on multiple supply chain links to get consumer goods into the informal retail environment for resell, in which leads to high distribution cost and unaffordable reselling price, and in effect translates to product inaccessibility (M.J. Lancefield, personal communication, August 15, 2019). Distribution access is identified as the main challenge for organisations attempting to penetrate the informal market. The limitations around distribution access such as physical barriers, inadequate infrastructure, low demand, and inflated distribution and logistics cost accompanied by a lack of access to product information and knowledge create a major barrier to entry into the informal market (Streb & Janse, 2017).

In order to achieve high profitability in the bottom-end market, organisations need to adapt to a low price, low margin, and high sales, high volume business model. To achieve high volumes, organisations need to ensure that consumers have accessibility to their products. Transaction costs need to be reduced and processes need to be streamlined to achieve this effectively. However, challenges related to reaching these consumers and successfully delivering the products to the local vendors and spaza shops in geographically dispersed areas with limited logistic support and inadequate infrastructure need to be taken into account and circumvented (Payaud, 2014). Many organisations face route-to-market limitations prohibiting the effective distribution of products into the informal trade, mainly as a result of not having adequate distribution channels into far-flung geographic rural areas. This forces organisations to depend on formal retail outlets to push products down the purchase funnel to reach the retail environment in informal settlements. Previous research studies have identified distribution and retailing as the core challenges faced when expanding into the emerging market segment, as the unstructured retail environment restricts organisations from effectively applying marketing mix strategies (Kumar et al., 2014).

Removing intermediaries from a supply chain is known as disintermediation. Disintermediation creates a leaner supply channel without distributors or agents, thereby reducing distribution cost, strengthening direct relationships with customers, and reducing resell cost (Andersson & Ahlander, 2016). Several disintermediation theories have been researched and explored. In this research paper, the focus will be on symbiotic disintermediation. In theory disintermediation suggests that organisations streamline their supply chain strategies by displacing unnecessary supply chain links (Sampson & Fawcett, 2001). According to Hosman and Fife (2012), service platforms (Figure 1) permit organisations to advance their business processes. They further argue that organisations are dependent on partnerships to effectively deliver and enhance value proposition in the mind of the consumer, particularly taking into consideration infrastructure inadequacies and accessibility constraints. Furthermore, the conceptual model in Figure 1 indicates that multiple organisations partner their efforts by collaborating with regard to their business models, supply chain strategies, and processes, to successfully supply services or products to the end users, an enterprise formerly deemed unfeasible (Hosman & Fife, 2012).

The Masakhane project implemented by Clover South Africa and jointly by multiple South African brands, which include Eskort (Pty) Ltd, was established with the intent of penetrating the informal market and rural developments in South Africa. The concept was formulated by focusing on product development in smaller pack sizes at affordable price points through a distribution channel that enables brands to directly reach the informal retail environment, a market previously unreachable (M.J. Lancefield, personal communication, April 20, 2019). Clover redesigned their distribution model in 2012 in order to extend the opportunity to brands to target and reach the bottom-of-the-pyramid market. The supply chain model enables stores in the informal trade to receive multiple deliveries on a weekly basis. The distribution model implemented by Clover, as a hub-and-spoke model, services over nine thousand stores in the rural sector of South Africa and creates the opportunity for brands to access their informal trade customers directly (Yadavalli & Prinsloo, 2018).

To reduce costs effectively and obtain supply chain effectiveness, organisations need to improve their product innovation in parallel with their supply chain and distribution models. Adapting the links between manufacturers and buyers enables businesses to apply cost effective solutions while building direct relationships with consumers. This can be done effectively through streamlining the supply channel by adopting disintermediation strategies (Andersson & Ahlander, 2016). It is proposed that symbiotic disintermediation allows suppliers and manufacturers to directly access previously unexplored market segments (Sampson and Fawcett 2001). Affiliations with organisations that have an establish distribution model in the market can help manufacturers to bridge the physical and infrastructural gaps faced by many organisations which previously have not tapped into this market (Janse & Streb, 2017).

### 2.4.1 Frugal Innovation

Tiwari and Herstatt (2013) argued that frugal innovation is specifically designed to target mass markets with the intent to support high volume sales at low margins by utilizing economies of scale to lower costs. The middle and lower tiers of the economic pyramid are deemed to be the fastest growing markets globally (David-West, Ihenachor, & Umukoro, 2019) and while these two markets are considered to be the mass market in South Africa, they face major limitations with regard to accessible resources. This environment furnishes great opportunity for frugal innovation. The key success factor for brands to reach the unexploited market segments is to develop opportunities and aptitudes for resource constrained markets with innovations that create high value at a low cost. If this can be done successfully, it can act as a point of parity while maximising profits (Zeschky, Winterhalter, & Gassmann, 2014).

. Studies have indicated that many businesses fail at the attempt to penetrate the base-of-the-pyramid consumer market in developing countries purely due to a gap in their existing business models that do not synergise with the specific requirements for this market (Gold, Hahn & Seuring, 2013). For innovation to be deemed as frugal within the base-of-the-pyramid market, businesses should obtain absolute knowledge of the basic needs of the resource-constrained consumers (Berger, 2015). They need to focus on identifying the needs and opportunities in adverse conditions, and target these conditions by simplifying innovations while working toward delivering more output with reduced input, driven by agility and simplicity. Frugal innovation goes beyond reinventing products. Frugal Innovation involves simplifying production processes and adapting business models (David-West, Ihenachor, & Umukoro, 2019).

Berger (2014) dissected the term FRUGAL to elucidate the main features that characterize frugal innovation, extrapolating the acronym into six pillars namely, functional, robust, user-friendly, growth, affordability, and local.

1. *Functionality*: Frugal products are defined as a functional and pragmatic solution to consumer needs, particularly those consumers residing in the bottom tiers of the economic pyramid and facing budget constraints (Berger, 2014).
2. *Robust:* When considering the attributes of the bottom-of-the-pyramid consumers, robust products are a key criterion in frugal innovation. Product durability and reliability in adverse conditions are crucial, as this consumer segment deems longevity and reparability very important.
3. *User-Friendly*: When considering the consumers in the lower tiers of the economic pyramid, frugal innovations need to provide a simplistic no-frills functionality which offer high value to this customer segment. Consumers should be able to use a product adequately with no prior knowledge or training, because ultimately frugal innovation should simplify their lives rather than adding another layer of complexity with over-engineered innovations.
4. *Growth*: With frugal products defined as being market-driven innovations, the main objective is to reach into unserved markets and serve unmet needs with a product that has the potential of triggering vigorous market growth.
5. *Affordability:* Affordability is one of the most important aspects of frugal innovation for the lower-end market. The key driver to affordability is evading unnecessary cost rather than attempting to cut existing cost. Several authors argue that frugal solutions are defined by a low cost of ownership, and to achieve low cost the entire value chain must be considered. Frugal innovation is intended to be viewed not only from a selling price perspective but rather from the perspective of the overall cost of operation.

6. *Local*: Accessing local resources allows organisations to reduce development costs and risks. Furthermore, obtaining resources locally allows organisations to customise products and innovations to meet specific local needs.

When carefully articulating these parameters, successful frugal innovation can be developed for a resource constrained market such as the bottom-of-the-pyramid consumers in South Africa. However, the major limitation repeatedly coming to light is route to market distribution, which affects consumer accessibility to these innovations.

In most markets and particularly in the informal market, manufacturers rely heavily on independently owned retail distribution channels to reach their consumers. In the informal trade, the effective implementation of distribution strategies is challenged by the inadequate infrastructure and a low penetration of retail stores that do not meet customer needs. Furthermore, products are typically distributed in various forms through the different retail channels. Manufacturers consistently invest efforts in managing their relationships with retail distribution partners to make products accessible to the market. However manufacturers' retail distribution decisions are much more challenging in the informal trade than in the formal sector for several reasons. The informal trade features largely underdeveloped infrastructure with a lack of highways and roads to reach the respective rural areas. The informal markets are situated within extended geographies each consisting of insufficient retail landscapes, leaving manufacturers with ineffective access to each of the respective regions and sales territories through traditional retail distribution (Sharma et al., 2019).

As revealed by previous research studies, frugal innovation does not revolve solely around physical product innovation but includes the entire value chain. In the context of this research study, frugal innovation is built around reducing the complexity of the route-to-market distribution channel between manufacturers and the informal retail trade, by focusing on efforts to create a leaner supply chain. The distribution infrastructure in the bottom-of-the-pyramid market is insufficient as formal distribution channels do not reach most customers as they would in developed markets. A cost-effective logistics and distribution model plays an integral part in ensuring product availability at the point of sale in informal retail outlets. Due to this market being geographically excluded from the formal economy it is important to consider a multimodal transport strategy which is sustainable in delivering goods to the geographically dispersed segments (Rocca, 2016).

Creating a leaner supply chain can enable manufacturers to reduce the route-to-market complexities they face, which generally comprise of multiple links in the distribution channel with additional processes which increase pick up costs, and ultimately leave brands with no control over market penetration. A leaner supply chain, which is made possible through the application of disintermediation strategies, further enables brands to become more responsive to consumer needs. This form of frugal innovation enables manufacturers to access the informal retail trade directly and ensures that a greater portion of their offering gets into the hands of the consumers in informal markets. The implementation of frugal innovation to reach the untapped mass market of South Africa involves developing non-conventional distribution channels to overcome gaps conventional logistic services cannot bridge, such as inadequate infrastructure, expensive transportation costs, and restricted access to geographically dispersed areas.

To overcome the distribution challenges and ensure accessibility of products into the informal trade, most manufacturers rely on local networks and informal retail chains such as spaza shops and traders to distribute products and drive sales (Rocca, 2016). However, it is not an optimal solution, as it leaves manufacturers with little to no control over the distribution chain. To successfully access the bottom-of-the-pyramid market through frugal innovation, organisations are advised to establish partnership with external cohorts (Campos et al., 2020) and lean on unconventional supply chain models by outsourcing supply chain practices where they lack in capacity or capability, enabling businesses to bridge the gap between manufacturers and unexplored markets (Gold, Hahn & Seuring, 2013).

### 2.5 Conceptual Framework and Propositions

Considering the preceding paragraphs and definitions, frugal innovation in the context of this research paper referred to reducing the complexities in the value chain operation by eliminating unnecessary distribution links that are prohibiting access to the informal trade, and reaching the bottom end consumer with products in the processed meat industry. A frugal innovation opportunity accompanied by product architecture is a method that could allow businesses to extend their reach and enter an entire new market (Zeschky, Winterhalter, & Gassmann, 2014).

Figure 1 (VISOR Model) demonstrates how the theoretical underpinnings of incorporating disintermediation into the price pack architecture theory can solve the distribution problems experienced by organisations trying to reach the bottom-of-the-pyramid market. In light of this, the following propositions are formulated.

## 2.6 Conceptual Model

The particular model suggested for this research study is the VISOR model, which consists of five components that make up the acronym, namely: The Value proposition, user Interface, Service platform, Organizational model and Revenue model. The VISOR model brought together multiple elements and underlying drivers of a price pack architecture business model in traditional markets and was deemed appropriate for this research study. The existing set of criteria in the original VISOR model by Hosman and Fife (2012) needed to be extended by integrating disintermediation as a factor so that the model could display the outcome of amalgamating theories to overcome the distribution challenges impeding price pack architecture in the bottom-of-the-pyramid-market segment.

The conceptual model was selected as the framework used in this case research study to illustrate the anticipated outcomes of the research study, by mapping out how the principles of price pack architecture can enable organisations to reach the bottom-of-the-pyramid segment and how each principle might relate to the others. A breakdown of the respective principles that relate to an effective price pack architecture model is presented below.

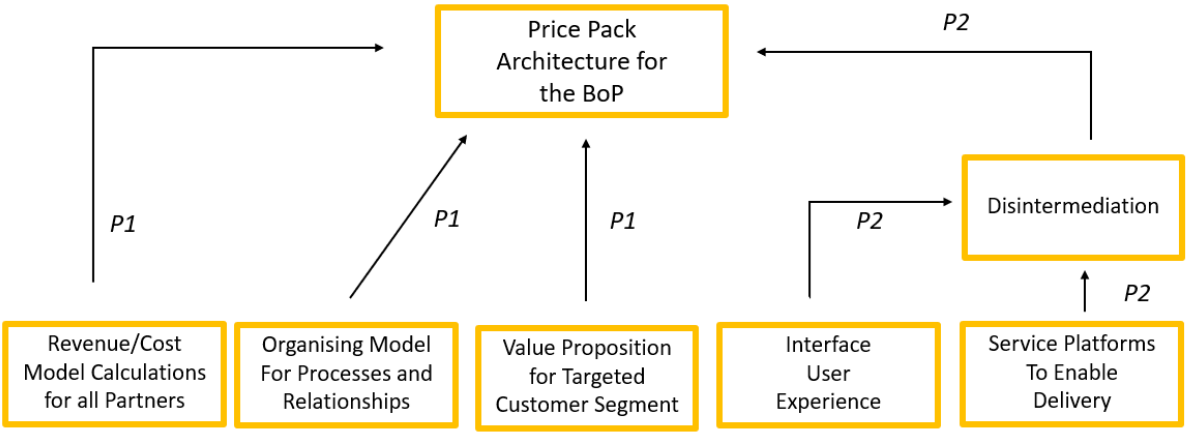


**Figure 1: VISOR Business Model: Top-Down-Meets-Bottom-Up Partnering** (Hosman & Fife, 2012) adapted to incorporate disintermediation as a construct of price pack architecture to reach the bottom-of-the-pyramid market in South Africa.

### 2.6.1 Value Proposition

Value proposition refers to the value consumers attach to a product or service along with their willingness and ability to pay for that item, which is a significant challenge in resource deprived markets such as the bottom-of-the-pyramid market. A consumer's willingness and ability to pay for an offering relate directly to whether a product provides the market with a "value creation" which effectively satisfies an unmet need or addresses value substitution where the offer provides an alternative to an existing product or service (Hosman & Fife, 2012). As highlighted in Chapter 2, price pack architecture alludes to product, pricing, accessibility and the willingness to pay a particular price for a product. Only once a product is deemed to delivers a value proposition to a consumer will the consumer be inclined to pay any given amount and will price pack architecture be achieved. Value proposition is demonstrated in this case research study and through the data analysis depicted in Chapter 4 (Table 5). Value proposition correlates to the pricing pillar of the price pack architecture strategy.

### 2.6.2 Interface

The interface model refers to the effective delivery of a product or service to a market, it particularly addresses the aspect of convenience and product aesthetics which intends to meet their needs (Hosman & Fife, 2012). As highlighted in Chapter 2 accessibility is a critical component to achieve a successful price pack architecture strategy. While the literature review in Chapter 2, highlighted several distribution challenges which obstruct the successful penetration into the informal market and achieving price pack architecture it is argued that the incorporation of disintermediation as a component of price pack architecture can build a strong interface model that allows for the effective delivery of products to the bottom-of-the-pyramid-market.

#### 2.6.2.1 Disintermediation

The interface model links to Proposition 2, which refers to the application of disintermediation as a principle of price pack architecture to reach the bottom-of-the-pyramid market in the rural townships of South Africa. Road infrastructure inadequacies and difficult to access markets pose distribution challenges believed to be surmountable by integrating disintermediation into the conceptual framework.

### 2.6.3 Service Platforms

Service platforms describe the business processes and relationships that are needed to ensure effective delivery of products and services to the market while improving the value proposition, bearing in mind infrastructure inadequacies and limitations (Hosman & Fife, 2012). Price pack architecture alluded to in Chapter 2 is a business process and model believed to enable organistaions to reach new markets, however in the context of the bottom-of-the-pyramid-market, it is argued that additional business processes and relationships need to be incorporated to bridge the distribution gaps experienced in the informal market, to reach the bottom-of-the-pyramid-market.

#### 2.6.3.1 Disintermediation

The service platform pillar links to Proposition 2, extrapolating disintermediation as a principle of price pack architecture to assure effective distribution and delivery of products to the difficult to reach, bottom-of-the-pyramid market.

### 2.6.4 Organising Model

The organising model links to Proposition 2 in the context of this research study, referring to the relationship between enterprises or partners intended to establish business models, value chain operations, and affiliations to deliver products and services effectively and efficiently to the market (Hosman & Fife, 2012).

#### 2.6.4.1 Disintermediation

This case research study focuses on disintermediating the supply chain through partnering with Clover South Africa to directly access and reach the bottom-of-the-pyramid market segment. This principle of the organising model relates to proposition 2 which attempts to demonstrate that integrating disintermediation (through partnering with external cohorts, like Clover) as a principle of price pack architecture can enable businesses to reach the bottom-of-the-pyramid segment.

### 2.6.5 Revenue Model

The revenue model describes the value proposition, the delivery of the offering, and the processes involved to ensure that revenue exceeds cost while ensuring that the offer remains attractive to all partners (Hosman & Fife, 2012). The Masakhane project enables Eskort to obtain a clear understanding of the bottom-of-the-pyramid's income patterns and buying behaviours in order to ensure efficient delivery of products to the market.

Clover South Africa's route-to-market distribution system allows manufacturers such as Eskort (Pty) Ltd to target local business owners and spaza shops directly through a cold calling sales execution team, enabling organisations to tap into a previously inaccessible market through partnering with their Masakhane initiative (Van Woerkom, 2016). Partnering with Clover enables organisations such as Eskort to disintermediate the supply chain, reduce distribution costs, and create a value proposition to the bottom-of-the-pyramid market. Value proposition is demonstrated in Chapters 4 and 5 in the presentation and discussion of research results.

## 2.7 Propositions

Based on the Conceptual Model above, the subsequent propositions are stated below:

*Proposition 1*

*Price pack architecture can be applied by organisations to effectively extend their reach into new market segments, if all theoretical constructs relating to product, price and accessibility are applied. However,* when it comes to the bottom-of-the-pyramid market segment, price pack architecture on its own is not deemed viable to reach this segment., *and an additional construct needs to be incorporated into the theory to achieve a successful price pack architecture strategy to reach the base of the pyramid.*

*Proposition 2*

*The integration of disintermediation as a component of price pack architecture can aid organisations to overcome the distribution challenges in the bottom-of-the-pyramid market that currently prohibit organisations from effectively applying price pack architecture in the informal rural environments in South Africa.*

The next chapter presents the research methodology which includes the procedures and techniques used to demonstrate how price pack architecture can enable organisations to effectively reach the bottom-of-the-pyramid consumer market in the informal rural environments in South Africa when disintermediation is incorporated as a construct to overcome distribution challenges impeding a successful price pack architecture strategy. This is demonstrated by using a case study of the processed meat industry.

The researcher followed the business model proposed by Hosman and Fife (2012) and applied the VISOR semantic model to describe the effect price pack architecture has on expanding into markets previously untapped. The researcher conducted a quantitative case research design to establish, analyse, and define how the variables interact.  Secondary data was most suited to the research study.

#### 2.6.6 Conclusion

Chapter 2 illustrates that price pack architecture enables organisations to effectively reach and expand their markets into new consumer segments, on condition that business effectively apply all principles relating to producing product innovations that meet the consumer needs, offering a price point that the market is both willing and able to pay while ensuring that the products are made available and accessible to the market. However, when it comes to the bottom-of-the-pyramid market, organisations need to practice frugal innovation by integrating disintermediation strategies as a component of price pack architecture to overcome the distribution hurdles that prevent organisations from successfully reaching the bottom-of-the-pyramid segment through price pack architecture.

# CHAPTER 3: RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter provides an overview of the research methodology undertaken for this study. Quantitative research methodology and the related literature are discussed, followed by the research design that was used. Data collection methods and data analysis relative to the study are provided, and lastly, a discussion on the validity and reliability of the study.

## 3.2 Research Paradigm

The research methodology involves the research paradigm and the research design that will be applied in this study. There are three popular paradigms among social science researchers, namely positivism, post-positivism and interpretivist paradigm. Positivism states that science and research are restricted to a phenomenon that can be observed and measured and which can directly be tested. Post-positivism states that researchers can make reasonable conclusions relating to a phenomenon by combining empirical with logical reasoning (Bhattacherjee, 2012). An interpretivist paradigm allude that reality can be multi-layered, stating that a single phenomenon might hold several interpretations (Pham, 2018). Of the several popular paradigms, this case research study followed a post-positivist design approach due to the softening of the positivists paradigm and because it is not strictly controlled according to the scientific method.

The research study made reasonable conclusions relating to the integration of two theoretical constructs, disintermediation and price pack architecture, to enable organisations to overcome distribution hurdles experienced in the bottom-of-the-pyramid market in South Africa. A case study of the processed meat industry was used to demonstrate how this can be achieved.

Case research is detailed investigation of a problem in one or more case sites over a prolonged period of time. Data collection methods can include several approaches and for the purpose of this case study research, internal secondary data from Eskort (Pty) Ltd. was obtained to demonstrate how disintermediation can be used as a strategy for price pack architecture to overcome distribution challenges in the processed meat industry.

A quantitative research paradigm was applied to carry out the study as the researcher needed to identify the conditions and outcome of integrating the two theoretical constructs of disintermediation and price pack architecture to explain how the distribution challenges in the informal retail environment can be overcome. It is widely accepted that distribution challenges prohibit organisations from successfully achieving price pack architecture but integrating disintermediation as a component of PPA is envisaged as a solution. The obtained data was statistically analysed, to infer the nature of the investigated relationships and the impact on the stated phenomena (Creswell, 2013). A quantitative research method and design were used to demonstrate the application of disintermediation as a component of price pack architecture. The quantitative study aimed to exemplify the effect of integrating two theoretical constructs to aid organisations in overcoming distribution inefficiencies, by using descriptive research. To ascertain data reliability of the information obtained from Eskort (Pty) Ltd., insights have been observed and measured over a four-year period. Raw sales data of Eskort products specifically targeted at the informal market were selected and analysed. The data included sales growth, geographical reach, and market growth per region focusing on data relating to the informal markets and rural areas across Western Cape, Eastern Cape, Gauteng, and KwaZulu Natal. The trends in sales performance over four years were analysed and observed. The study also considered the impact listeriosis has had on the category and the processed meat industry as a whole.

### 3.3 Research Design

The research design for the study incorporates a case research technique which is classified as an intensive longitudinal study of a phenomenon for the purpose of obtaining comprehensive, contextualized inferences and conceptualising the dynamic process underlying a phenomenon of interest. Case research is a unique research design that can be used to build theories in a post-positivist manner to test propositions or interpretively to build theory. The case research technique allows the researcher to conduct an in-depth investigation of a problem within a real-life setting across a specific period. This research method enables researchers to discover an extensive range of social, cultural, and political factors potentially related to the area of study which might be unknown to the researcher prior to investigating the phenomenon (Bhattacherjee, 2012).

The study required obtaining secondary data from Eskort Pty (Ltd). Sales data in the form of product pack sizes, sales value, sales volume, and regional distribution insights was analysed in parallel with a time series analysis to assess the impact over time and to determine the changes in numerical outlet growth. The research study focused on eight product categories which constitute the entire product population sold to the informal trade by Eskort (Pty) Ltd., while identifying several stock keeping units (SKU's) in each category. The change in sales volume and value along with geographical reach was observed over a four-year time period from 2016 to 2019. The study further assessed value over volume analysing the value proposition over time. The sales insights and data from Eskort (Pty) Ltd was at the researcher's disposal, could be obtained without delay and was deemed most cost effective. The data was obtained in a digital format and could be retrieved electronically. Considering the topic of the research project, access to the consumer goods sales data was important for this project, and this access was made possible by Eskort (Pty) Ltd.

Quantitative research questions for this study were formulated in such a way as to determine the relationship between constructs that is stated in a declarative way. Quantitative research focuses on collecting numerical data to substantiate a theory and numerical data is considered to hold stronger representation power than qualitative data (Andersson & Ahlander 2016).

The researcher developed two propositions. The first proposition was addressed theoretically in the discourse in Chapter 2, and proposition 2 was empirically tested.

*Proposition 1*

*Price pack architecture can be applied by organisations to effectively extend their reach into new market segments, if all theoretical constructs relating to product, price* *and accessibility are applied. However,* when it comes to the bottom-of-the-pyramid market segment, price pack architecture on its own is not deemed viable to reach this segment.*, and an additional construct needs to be incorporated into the theory to achieve a successful price pack architecture strategy to reach the base of the pyramid.*

*Proposition 2*

*The integration of disintermediation as a component of price pack architecture can aid organisations to overcome the distribution challenges in the bottom-of-the-pyramid market that currently prohibit organisations from effectively applying price pack architecture in the informal rural environments in South Africa.*

Case research focuses on collecting data for the objective of theory building or theory testing to obtain a richer and a more concise interpretation of the phenomenon under study. The current research study was conducted as case research as the researcher wanted to investigate a phenomenon across a specific time over several sites (Bhattacherjee, 2012). This study attempted to explore the integration of two theoretical constructs, namely, disintermediation and price pack architecture, to aid organisations in the processed meat industry to overcome the distribution challenges experienced in the informal market of South Africa, particularly in the rural townships where most of the South African bottom of the pyramid resides. Overcoming these distribution challenges that are currently being experienced by organisations in the processed meat industry can help manufacturers to obtain market reach and expand into the informal market segment of South Africa, where current research identified ineffective distribution channels as a significant barrier to entry.

Case research is particularly suitable when conducting exploratory studies to discover relevant constructs in fields where theory building is at the formative stage, for research where experiences of participants and the context of actions are vital, and in the case where research attempts to understand the "why and how" of a phenomenon being studied rather than understanding the "what", that is, factors or causes (Bhattacherjee, 2012). The researcher considered the exploratory research approach to fit the purpose of this study. Exploratory research examines the research variables in detail to obtain insights into a suitable portrayal of the reality of the study being researched. Descriptive research provides a true representation of the antecedents of a sample, occurrence, or segment in real-life situations. The intent of this descriptive case research study was to give a clear representation regarding the insights into the phenomenon at study. The researcher aimed to identify and describe how disintermediation as a component factor of price pack architecture can assist organisations to overcome distribution challenges in the bottom-of-the-pyramid market in South Africa.

### g3.3.1 *Population Design*

For this case research study, the researcher analysed the complete population of sales that were incorporated into the Masakhane project. The population was divided into two consumer groups, namely General Trade (GT) and Food Service Industry (FSI). This categorisation was considered necessary because the consumers operated differently in the informal market. The researcher observed the complete population of sales between 2016 and 2019 across all sites in which the sales units were distributed. These sites included Gauteng, Western Cape, Eastern Cape, and KwaZulu Natal. The population of sales included eight product categories of processed meat products sold to the informal trade by Eskort (Pty) Ltd. with several stock keeping units (SKU's) in each product category. The product categories were numbered, and product names were excluded to protect proprietary information. These sales units included processed meat products such as polonies and processed sausages. The eight categories were selected for distribution into the informal trade based on the nature and characteristics of the market segment under study and their need for an affordable protein staple. The population set included complete timelines of sales since the partnership of the Masakhane project in 2016. This population was selected because they were deemed most fitting for the case research study. The population set could be scaled in terms of volume and sales and no sampling was applied since all sites of the projects were incorporated in this case research study.

For the purpose of this case research the researcher utilised internal secondary data from Eskort (Pty) Ltd. The sales insights included data for eight processed meat product categories, each containing several stock keeping units. The researcher analysed sales data of all products sold in the informal market over a four-year period, from 2016 to 2019, since the partnership with Clover South Africa's, Masakhane project. The sales insights encompassed all distribution sites which include Gauteng, Western Cape, Eastern Cape, and KwaZulu Natal.

### 3.3.2 Research Instrument

Sales insights were measured from the database and sales information was garnered from Eskort's internal resources. The research data was obtained from Eskort (Pty) Ltd, therefore no research instrument was used for the purpose of this study.

## 3.4 Data Collection

Secondary data collection relates to data previously collected in an area of interest which can be repurposed for the use of alternative studies (Johnston, 2017). Secondary data in this theoretical study was collected from the internal resources of Eskort (Pty) Ltd. and consists of data primarily utilised by the organisation to monitor brand performance by their sales department. In cases where secondary data proves to be insufficient to the study at hand, data conversion is to be considered for the researcher to adequately achieve their research objective (Van Woerkom, 2016). Secondary data is defined as 'internal' or 'external' data depending on the source of the data. Internal secondary data refers to insight acquired from the database of a firm's internal resources (Mohajan, 2017), in the case of this research study, numerical sales data, distribution analysis and insights that have relevance to the topic of study.

### 3.4.1 Procedure for data collection

The researcher obtained secondary data directly from the internal resources of Eskort (Pty) Ltd, a participant in the study. Electronic data was shared with the researcher to analyse and verify the research propositions. The researcher formally notified the organisation of the intent and purpose of the study through formal communication. A formal request was sent to request that access be granted to the internal resources and data required to conduct the study. A confidentiality clause was submitted to Eskort (Pty). Ltd, which was signed by the researcher to ensure confidentiality is maintained throughout the data collection process.

The collection method was uncomplicated. Data collection occurred electronically and consolidated in a workable format which enabled the researcher to analyse the data provided.

The data requested by the researcher included:

- Informal trade market size and trends over a four-year period from 2016 to 2019.
- Sales volume and value of respective stock keeping units (SKU's) in eight product categories over a four-year period.
- Detailed list of stock keeping units sold to both customer groups (General Trade & Food Service Industry) in the informal trade.
- Geographical locations of informal retail outlets, being supplied by Eskort (Pty) Ltd. over time.

### 3.4.2 Format and design of the data collection process

The researcher aimed to obtain accurate information from a representative population for the purpose of this study. The researcher selected this particular case study to demonstrate how the amalgamation of two theoretical concepts (disintermediation and price pack architecture) can aid organisations in the processed meat industry to overcome distribution challenges. The researcher requested access to internal resources relating to sales figures, market distribution and outcomes to obtain the insights needed to conduct the case study. Data collection approaches were formulated in such a manner that the goals of the study can be achieved. The data required to conduct this study was pre-determined to enable a fluent data collection process.

## 3.5 Data analysis and interpretation

Microsoft Excel was utilised for data entry and data presentation as it provided the descriptive analysis methods required to summarise and graph the data at hand. Microsoft Excel is widely used in business and management research.

## 3.6 Limitations of study

The study analysed the sales and distribution insights from Eskort's chilled processed meat product category. While several studies have recognised the limitations of distribution and reaching the bottom of the pyramid consumer in an informal market, the current study focused on introducing disintermediation as a component of price pack architecture to overcome the barrier to entry in the informal retail environment in South Africa. This study along with others focus on the distribution partnership with external parties, but the focus in this case is purely on distribution of chilled products. Future studies could investigate a broader range of perishable products and the distribution of products in frozen form.

This study analysed the opportunity of disintermediation strategies as a form of frugal innovation in the South African market. Market characteristics considered in this study might not apply to emerging markets outside of South Africa.

The study's population was based on the cold meat category and specifically related to Eskort (Pty) Ltd. and therefore by implication may not be an accurate representation of other consumable goods categories.

No sales data prior to 2016 could be obtained through Eskort Pty Ltd. as the organisation did not have any previous sales into the informal market and no data to present. Due to the nature and limitations of studies by previous researchers as well as the complexity of businesses not being able to successfully penetrate the informal market, future research could attempt to revise the specific method for acquiring data by obtaining data both prior to and after the adoption of disintermediation strategies, to draw a parallel in the findings.

Sales data contains data from 2018 during the Listeriosis outbreak which could potentially have impacted the results and might not be a true reflection and representation of sales in a normal setting.

## 3.7 Validity and reliability

Validity evaluates whether the research instrument assesses and measured what it intended to measure, and whether the outcome is valid (Arisha & Ragab, 2018).

### 3.7.1 External Validity

Post analysis and evaluation of the data ought to provide confirmation of the dependability and credibility of the research findings and results. The results will lend insights to sales trends of eight product categories in the informal trade over a four-year period ranging from 2016 to 2019, across four provinces (Eastern Cape, KwaZulu Natal, Western Cape, and Gauteng). However, the challenge faced with case study approaches is whether the findings can in fact be generalised beyond the study itself and it is argued that data collected in a case study approach might not be representative of the population as a whole. External validity can be strengthened by referring the findings back to existing literature, to indicate that the results are theoretically feasible or are supported by similar empirical studies (Gray, 2016). This may allow generalisation to the organisation operating in different geographic regions, across different products categories, over a different period of time.

### 3.7.2 Internal Validity

Internal validity refers to establishing causal relationships between phenomena, where research data is believed to link one condition to another, as distinguished from specious relationships (Yin, 2018). This research study had limited internal validity as the research study made use of a single population and no control groups were applied. This research study was based on a case study analysis and had no causality as there were no causal relationships between the constructs

### 3.7.3 Reliability

Reliability suggests that the operations of a study and its data collection methods can be repeated and present future researchers with the same results and outcomes. The main objective of reliability is to minimise potential errors and prejudice in a research study (Yin, 2018). Reliability was ensured by documenting the procedures followed in this case research.

## 3.8 Ethical considerations

Ethical considerations involve a set of moral guidelines on correct conduct regarding participants of a study (De Vos et al., 2011). These involve the following:

### 3.8.1 Permission to conduct the study

Permission to conduct the study was obtained from and granted by Eskort (Pty) Ltd (Appendix A & B). The respective representatives from Eskort (Pty) Ltd. who hold the authority to share the insights required for the purpose of the study were adequately briefed about the research project and study at hand. Informed consent was very important and indicated the participants' willingness to take part in the study voluntarily. The consent letter gave information about the study project and participation required for the study (De Vos et al., 2011). By accepting the formal consent form and by sharing internal secondary insights, the participants indicated that they agreed to take part in the study as the purpose of the study was set out in detail.

## CHAPTER 4: PRESENTATION OF RESULTS

### 4.1 Introduction

The objective of this case research was to demonstrate the effect of integrating disintermediation as a component of price pack architecture to enable organisations to reach the bottom-of-the-pyramid consumer market in rural townships in South Africa. This study focuses on integrating the two theoretical constructs to enable organisations to supply the bottom-of-the-pyramid market with the right product basket, sold at a price point which that market is willing and able to pay while focusing on accessibility of the products to this market, through disintermediation. To date the infrastructure inadequacies and unique nature of the informal market created a barrier to entry for many organisations attempting to achieve price pack architecture in the informal trade. Therefore, this research is believed to have the potential to aid organisations in bridging the distribution gap previously experienced in the informal market and more specifically the rural townships of South Africa. The findings of the study are presented in this chapter using descriptive statistics.

“Descriptive statistics” refers to statistically accumulating, describing, and presenting the constructs which relate to the integration of disintermediation as a component of price pack architecture using the processed meat industry as a case study.

### 4.2 Evaluation of missing results

The data set was completed with no missing values in the observed data analysis and no missing patterns were identified.

### 4.3 Characteristics of the case sites

The data set encompasses sales over a four-year period, from 2016 to 2019. The data set analysed the market in two consumer groups, namely, General Trade and Food Service Industry (FSI). General trade refers to informal retail stores or spaza shops that resell Eskort products in their original form, while FSI (Food Service Industry) refers to businesses and establishments that serve and sell food to customers outside of their homes, using Eskort products. The data was analysed to determine the sales volume and value over time across four sites namely Eastern Cape, Gauteng, KwaZulu Natal, and Western Cape. The project concentrated on KwaZulu Natal and Gauteng as the two main distribution regions due to the logistics and distribution capabilities being stronger, as these sites were within closer proximity to the organisation's distribution centre which enabled them to serve these sites more frequently and therefore to have a stronger market penetration.

The data represents the number of stores selling Eskort products over a four-year period since the implementation of the Masakhane distribution partnership through Clover South Africa in 2016. The data observed both consumer groups (General trade and FSI). The data was intended to investigate whether organisations could articulate price pack architecture adequately to reach the bottom-of-the-pyramid segment when integrating disintermediation as a component of price pack architecture. The data further depicts the sales volume and value over time for eight processed meat product categories in the Eskort basket which included products such as processed sausages and polonies. The product names in the data analysis were removed and products renamed in order to protect the organisation's proprietary information. The analysis of volume and value intended to determine whether the penetration of the informal market in the various regions through disintermediation, enabled Eskort to create a value proposition and achieve all constructs of price pack architecture.

**Table 1: Food Service Industry and General Trade product distribution per region**

| Food Service Industry (FSI) | | | | | | General Trade (GT) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Eastern Cape** | **Gauteng** | **KZN** | **Western Cape** | **FSI Total** | **Eastern Cape** | **Gauteng** | **KZN** | **Western Cape** | **GT Total** | **Total** |
| **2016** | 24 | 1809 | 6411 | 20 | 8264 | | 996 | 108 | 425 | 1528 | 9792 |
| **2017** | 15 | 2637 | 5964 | 8 | 8624 | | 330 | 74 | 335 | 738 | 9362 |
| **2018** | 463 | 4860 | 7303 | | 12627 | | 1481 | 158 | 366 | 2005 | 14632 |
| **2019** | 2980 | 14882 | 18376 | 90 | 36329 | 796 | 31633 | 8114 | 92 | 40635 | 76964 |
| Total | **3482** | **24189** | **38054** | **118** | **65844** | **796** | **34439** | **8454** | **1218** | **44906** | **110751** |

The data analysis in Table 1 was based on the actual sales volume of Eskort processed meat products in the informal trade for both consumer groups (General Trade and Food Service Industry). The data describes the sales across the four regions (Eastern Cape, Gauteng, KwaZulu Natal, and Western Cape) over a four-year period from 2016 to 2019, through the Masakhane distribution channel. Table 1 shows a general increase in sales from 2016 to 2019 with the exception of the Western Cape in the General Trade consumer group which experienced a decline in sales from 2016 to 2019. The positive sales growth indicates a strong demand for the processed meat products supplied by Eskort (Pty) Ltd. to the informal market, and implies that the organisation articulates product architecture efficiently and effectively through the Masakhane channel. The increase in sales was predominantly stronger in Gauteng and in KwaZulu Natal for both customer groups. These were the two main distribution regions, as Eskort had stronger logistic and distribution capabilities due to the proximity to the distribution centre.

Figure 2 and Figure 3 provide an extrapolation of the results in Table 1.

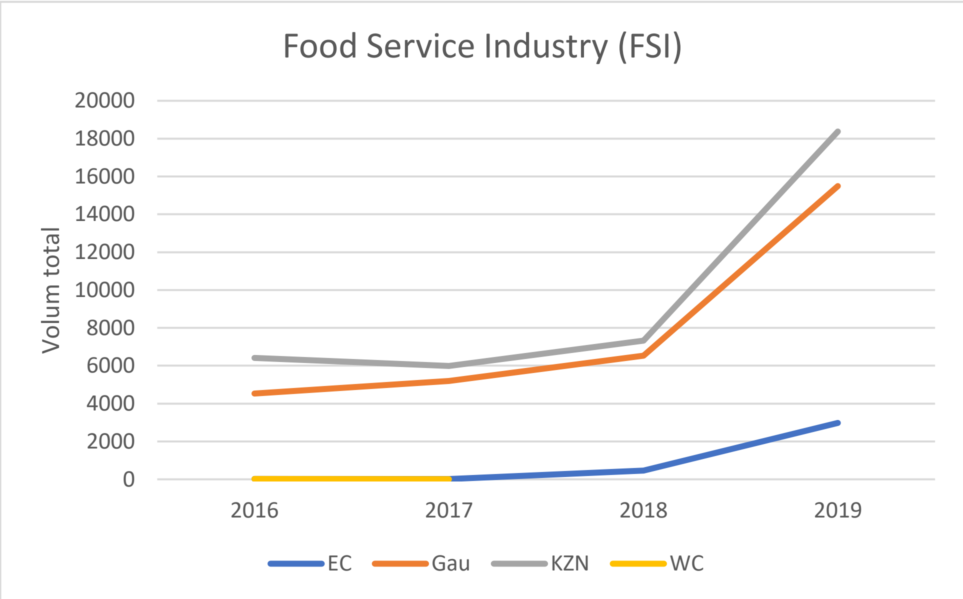


**Figure 2: Sales volume for FSI across regions (2016 – 2019)**

Figure 2 gives an illustrative representation of the data set in Table 1, demonstrating how the sales volume in the informal trade for the Food Service Industry (FSI) consumer group has increased over time. The line graph demonstrates the sales trends of Eskort products across four regions (Eastern Cape, Gauteng, KwaZulu Natal, and Western Cape) over a four-year period from 2016 to 2019. The data is a representation of sales in partnership with Clover South Africa, through their Masakhane distribution channel, which enabled the organisation to disintermediate the supply chain and target the informal market directly with the purpose of reaching the bottom-of-the-pyramid consumer market. Each of the geographic regions experienced an upturn in sales volumes from 2016 to 2019.

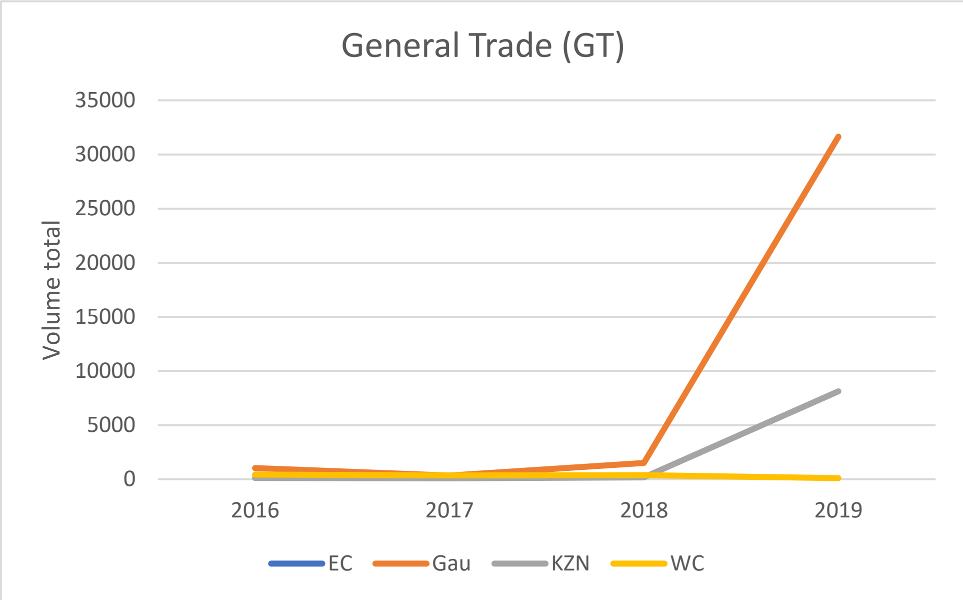


**Figure 3: Sales volume for General Trade across regions (2016 – 2019)**

The line graph in Figure 3 is an illustrative representation of the sales volume in the informal trade for the General Trade (GT) consumer group depicted in Table 1, indicating the changes over time. The line graph demonstrates the sales trends of eight product categories in the Eskort processed meat basket across four regions (Eastern cape, Gauteng, KwaZulu Natal, and Western Cape) over a four-year period from 2016 to 2019. When viewing the extrapolation in parallel with the sales value in Table 1, it is apparent that there is a clear increase of sales across Gauteng and KwaZulu Natal. As explained in the preceding paragraph these regions were the main distribution focus for Eskort (Pty) Ltd. because of the proximity to their distribution centre.

**Table 2: Consolidated sales volume**

| Products | Years | | | | |
|---|---|---|---|---|---|
| Row Labels | 2016 | 2017 | 2018 | 2019 | Total |
| Product 1 | 1 260 | 1 199 | 2 644 | 4 065 | 9 168 |
| Product 2 | 106 | 86 | 130 | 100 | 422 |
| Product 3 | | | 1 124 | 9 241 | 10 365 |
| Product 4 | 7 224 | 6 695 | 7 586 | 54 301 | 75 805 |
| Product 5 | 393 | 167 | 84 | 87 | 731 |
| Product 6 | 186 | 176 | 1 180 | 4 140 | 5 682 |
| Product 7 | 90 | 122 | 82 | 90 | 384 |
| Product 8 | 534 | 918 | 1 802 | 4 940 | 8 194 |
| Total | 9 792 | 9 362 | 14 632 | 76 964 | 110 751 |

Table 2 shows a consolidated view of the total sales volume of Eskort processed meat products across the General Trade and FSI consumer groups in the informal trade. The data is derived from eight product categories, sold over a four-year period, across the four regions under study (Eastern Cape, Gauteng, Western Cape, and KwaZulu Natal). The analysis gives a clear representation of sales performance per product category over time, indicating the demand of each product category amongst the customer groups collectively.

**Table 3: Independent sales volume across FSI and General Trade Consumer Groups**

| | Food Service Industry (FSI) | | | | | General Trade (GT) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Products** | **2016** | **2017** | **2018** | **2019** | **FSI Total** | **2016** | **2017** | **2018** | **2019** | **GT Total** | **Total** |
| **Product 1** | **580** | **914** | **2254** | **3845** | **7593** | **680** | **285** | **390** | **220** | **1575** | **9168** |
| 200 g | 225 | 335 | 1214 | 2680 | 4454 | h680 | 280 | 325 | 195 | 1480 | 5934 |
| 1 kg | 355 | 579 | 1040 | 1165 | 3139 | | 5 | 65 | 25 | 95 | 3234 |
| **Product 2** | **96** | **80** | **94** | **100** | **370** | **10** | **6** | **36** | | **52** | **422** |
| 500 g | 6 | 60 | 84 | 60 | 210 | | 6 | 6 | | 12 | 222 |
| 2.5 kg | 90 | 20 | 10 | 40 | 160 | 10 | | 30 | | 40 | 200 |
| **Product 3** | | | **563** | **8675** | **9238** | | | **561** | **566** | **1127** | **10365** |
| 4.5kg | | | 171 | 4059 | 4230 | | | 27 | 135 | 162 | 4392 |
| 6.45 kg | | | 392 | 4616 | 5008 | | | 534 | 431 | 965 | 5973 |
| **Product 4** | **6730** | **6342** | **7152** | **15812** | **36035** | **494** | **353** | **434** | **38489** | **39770** | **75805** |
| 180 g | | | | 341 | 341 | | | | 2642 | 2642 | 2983 |
| 250 g | 90 | 84 | 174 | 414 | 762 | 210 | 60 | 84 | 8148 | 8502 | 9264 |
| 500 g | 42 | 60 | 96 | 174 | 372 | | | | 792 | 792 | 1164 |
| 750 g | 180 | 248 | 398 | 225 | 1050 | 38 | 15 | 30 | 8 | 90 | 1140 |
| 1 kg | 318 | 480 | 444 | 426 | 1668 | 66 | 108 | | | 174 | 1842 |
| 2 kg | | | 40 | 672 | 712 | | | | 13320 | 13320 | 14032 |
| 2.5 kg | 6100 | 5470 | 6000 | 13560 | 31130 | 180 | 170 | 320 | 13580 | 14250 | 45380 |
| **Product 5** | **160** | **161** | **78** | **81** | **480** | **233** | **6** | **6** | **6** | **251** | **731** |
| 750 g | 130 | 5 | | 15 | 150 | 233 | | | | 233 | 383 |
| 1 kg | 30 | 156 | 78 | 66 | 330 | | 6 | 6 | 6 | 18 | 348 |
| **Product 6** | **186** | **170** | **830** | **3284** | **4470** | | **6** | **350** | **856** | **1212** | **5682** |
| 500 g | 186 | 162 | 486 | 1188 | 2022 | | 6 | 54 | 48 | 108 | 2130 |
| 2 kg | | 8 | 344 | 2096 | 2448 | | | 296 | 808 | 1104 | 3552 |
| **Product 7** | **14** | **46** | **76** | **90** | **226** | **76** | **76** | **6** | | **158** | **384** |
| 100 g | 2 | 10 | 46 | 42 | 100 | 22 | 22 | | | 44 | 144 |
| 250 g | 12 | 36 | 30 | 48 | 126 | 54 | 54 | 6 | | 114 | 240 |
| **Product 8** | **498** | **912** | **1580** | **4442** | **7432** | **36** | **6** | **222** | **498** | **762** | **8194** |
| 250 g | 24 | 42 | 66 | 138 | 270 | | | | | | 270 |
| 500 g | 228 | 354 | 498 | 792 | 1872 | 36 | | 36 | 48 | 120 | 1992 |
| 1 kg | 246 | 516 | 648 | 3480 | 4890 | | 6 | 18 | 450 | 474 | 5364 |
| 2 kg | | | 368 | 32 | 400 | | | 168 | | 168 | 568 |
| **Total** | **8264** | **8624** | **12627** | **36329** | **65844** | **1528** | **738** | **2005** | **40635** | **44906** | **110751** |

Tables 3 and 4 provide a detailed breakdown of the sales value and volume per product category in the different pack sizes for the population under study (GT and FSI). The data depicted in Table 3 and Table 4 was intended to provide a comparison of the baseline characteristics relating to sales value and sales volume for the population of the case research study, over time.

The data analysis in Table 3 indicates the sales volumes for the entire population consisting of the respective stock keeping units in each of the eight product categories respectively for both customer groups (General Trade and FSI). The data analyses sales of Eskort processed meat products across the four regions under study (Eastern Cape, Gauteng, KwaZulu Natal, and Western Cape) over a four-year period (2016-2019). The analysis illustrates the sales trend of each of the product categories in their respective pack sizes to indicate the sales performance per line item. The product categories were broken down to show the individual pack sizes for each to give a clear indication of the sales performance per line item over time. Analysing the product pack sizes was deemed necessary for this study to determine how the individual pack sizes relate to the construct of price pack architecture. Analysing the sales for the pack sizes per category allowed the researcher to determine whether the organisation under study articulated the principle of product in price pack architecture adequately. The assessment enabled the researcher to observe whether the pack sizes sold to the bottom-of-the-pyramid market led to a growth in product category sales for both customer groups. This analysis further enabled the researcher to determine whether the products selected were considered the right pack sizes for this market.

For the General Trade customer group, a general increase in sales volume across all product categories was identified with the exception of product category 5 which experienced a decrease in sales. The analysis indicates that the organisation experienced a strong demand for the product categories selected for this market in the General Trade customer group.

The Food Service Industry experienced both an increase as well as a decline in sales volume across the respective product categories 2016 to 2019. This observation illustrates that the same product basket did not serve this subsegment of the population as adequately as it did the General Trade customer group.

Following the analysis of sales volume for each product category across the entire population the researcher further analysed the sales value over time from 2016 to 2019 (Table 4). This analysis enabled the researcher to determine whether the price point of the product categories to the bottom-of-the-pyramid market created a value proposition to the population under study. Table 4 gives an illustration of the price point per product category and product items per pack size, respectively.

**Table 4: Sales value in Rands per stock keeping unit studied over volume**

| | Food Service Industry (FSI) | | | | General Trade (GT) | | | |
|---|---|---|---|---|---|---|---|---|
| **Products** | **2016** | **2017** | **2018** | **2019** | **2016** | **2017** | **2018** | **2019** |
| **Product 1** | **107,74** | **99,15** | **94,03** | **93,36** | **56,685** | **99,33** | **97,52** | **102,67** |
| 200 g | 113,60 | 106,71 | 99,98 | 100,65 | 113,37 | 116,91 | 102,85 | 124,44 |
| 1 kg | 93,68 | 85,29 | 84,05 | 76,87 | | 81,75 | 92,18 | 80,9 |
| **Product 2** | **69,35** | **68,53** | **51,89** | **67,52** | **64,8** | **65** | **59,47** | |
| 500 g | 65,00 | 66,29 | 51,15 | 59,49 | | 65 | 47,36 | |
| 2.5 kg | 71,53 | 73,00 | 55,60 | 79,57 | 64,8 | | 71,58 | |
| **Product 3** | | | **34,93** | **34,07** | | | **38,75** | **38,65** |
| 4.5kg | | | 36,51 | 35,73 | | | 40,63 | 40,52 |
| 6.45 kg | | | 34,04 | 32,91 | | | 36,86 | 36,77 |
| **Product 4** | **31,31** | **31,11** | **27,10** | **26,71** | **27,27** | **29,22** | **28,63** | **24,52** |
| 180 g | | | | 36,17 | | | | 32,93 |
| 250 g | 36,86 | 35,23 | 29,30 | 33,35 | 34,67 | 33,27 | 31,46 | 29,04 |
| 500 g | 36,44 | 38,66 | 38,62 | 33,73 | | | | 29,1 |
| 625 g | 41,56 | 46,10 | 42,47 | 49,18 | 33,5 | 39,23 | 38,6 | 52,25 |
| 750 g | 26,66 | 24,28 | 23,43 | 29,91 | 21,33 | 25,51 | 24,04 | 25,31 |
| 1 kg | 28,44 | 24,93 | 24,37 | 29,93 | 25,88 | 27,64 | | |
| 2 kg | | | 16,81 | 16,50 | | | | 16,23 |
| 2.5 kg | 21,00 | 21,12 | 20,14 | 20,39 | 20,97 | 20,43 | 20,42 | 19,69 |
| **Product 5** | **90,06** | **93,36** | **90,70** | **100,30** | **90,10** | **81,05** | **81,05** | **102,13** |
| 750 g | 86,71 | 83,69 | | 97,09 | 90,1 | | | |
| 1 kg | 95,10 | 98,20 | 90,70 | 101,11 | | 81,05 | 81,05 | 102,13 |
| **Product 6** | **73,88** | **55,65** | **62,05** | **63,50** | | **76,52** | **68,19** | **67,61** |
| 500 g | 73,88 | 64,84 | 63,47 | 70,41 | | 76,52 | 68,92 | 72,2 |
| 2 kg | | 37,28 | 58,41 | 57,93 | | | 67,45 | 63,01 |
| **Product 7** | **56,97** | **54,71** | **52,68** | **59,55** | **45,3** | **53,96** | **54,14** | |
| 100 g | 51,30 | 56,44 | 52,63 | 61,95 | 51,95 | 54,65 | | |
| 250 g | 59,80 | 54,14 | 52,73 | 57,14 | 38,65 | 53,26 | 54,14 | |
| **Product 8** | **50,83** | **47,08** | **41,25** | **36,02** | **42,91** | **38,36** | **45,93** | **43,87** |
| 250 g | 60,10 | 51,30 | 54,76 | 60,10 | | | | |
| 500 g | 53,21 | 49,85 | 47,35 | 53,60 | 42,91 | | 65,39 | 55,77 |
| 1 kg | 40,60 | 41,05 | 32,66 | 31,44 | | 38,36 | 34,31 | 31,97 |
| 2 kg | | | 30,98 | 37,04 | | | 38,1 | |

Table 4 is an analysis of the sales value in Rands per unit studied over time to obtain an assessment of a comparative unit price. The data shows the sales value in Rands which is paid by the consumer groups for the respective stock keeping units in different pack sizes. The data is for both the General Trade and Food Service Industry customer groups over a four-year period (2016 to 2019) to observe the change in price paid per product by the population under study.

The relationship between the product volume in Table 3 and the Rand value paid by the consumer groups per stock keeping unit (SKU) depicted in Table 4 illustrates that over time as the sales volume increased the Rand value at which the products were purchased by the customer groups generally decreased. Where the sales volume decreases the sales value in Rand effectively increases, indicating that the ordering volume impacts the price value paid by the consumer.

Drawing the correlation between sales volume and value reveals how the relationship between the two variables effectively creates a value proposition for the population at study, demonstrating that the more the sales volume increases the greater the value proposition in Rand value is to the consumer groups. Overall, the sales volume increased from 2016 to 2019 across most of the product categories with the exception of Product 5. Viewing Table 5 in parallel with Table 4 shows how the sales value in Rands increased when the volume decreased.

Table 5 shows how price pack architecture was effectively applied by Eskort (Pty) Ltd. using Product Category 1 as an example in the Food Service Industry customer group.

**Table 5: Sales Value over Sales Volume to create a Value Proposition for the FSI Consumer Group**

| Food Service Industry (FSI) | | | | | |
|---|---|---|---|---|---|
| **Sales Volume** | | | | | |
| **Products** | **2016** | **2017** | **2018** | **2019** | **FSI Total** |
| **Product 1** | **580** | **914** | **2254** | **3845** | **7593** |
| 200 g | 225 | 335 | 1214 | 2680 | 4454 |
| 1 kg | 355 | 579 | 1040 | 1165 | 3139 |
| **Sales Value (Value over Volume)** | | | | | |
| **Products** | **2016** | **2017** | **2018** | **2019** | **FSI Total** |
| **Product 1** | **107,74** | **99,15** | **94,03** | **93,36** | **94,88** |
| 200 g | 113,6 | 106,71 | 99,98 | 100,65 | 101,74 |
| 1 kg | 93,68 | 85,29 | 84,05 | 76,87 | 80,82 |

The results in Table 5 demonstrate that the sales volume increased consecutively from 2016 to 2019 while the sales value in Rands reflects a decrease as the volume increased, creating a value proposition for the population under study.

The line graph in Figure 4 depicts the changes over time in both the sales volume and value in Rand. Figure 4 demonstrates that from 2016 to 2019 there has been an upsurge in sales volume while the concurrent decrease in sales value is depicted in Figure 5.

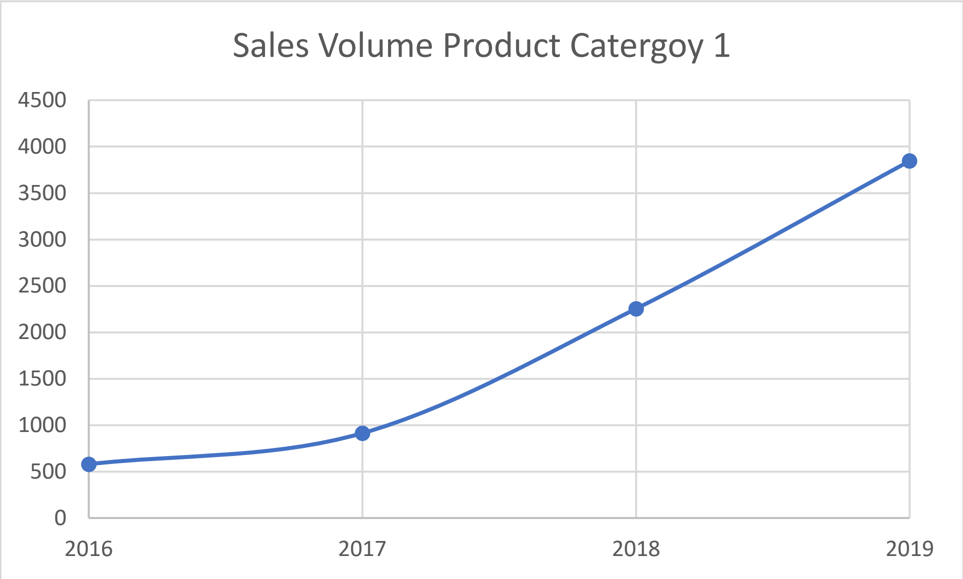


**Figure 4: Sales volume for Product 1 from 2016 to 2019**

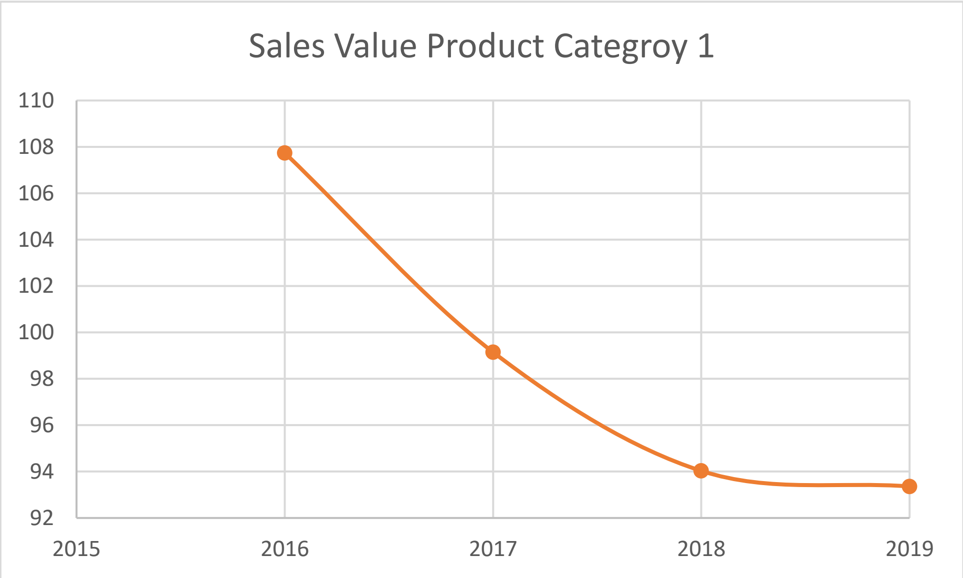


**Figure 5: Sales value for Product 1 from 2016 to 2019**

**Table 6: Number of stores per Geographic region (2016-2019)**

| Geographic Reach | 2016 | 2017 | 2018 | 2019 | Total |
|---|---|---|---|---|---|
| **Food Service Industry Customer Group** | **66** | **71** | **259** | **886** | **1282** |
| Eastern Cape | 3 | 2 | 16 | 88 | 109 |
| Gauteng | 45 | 54 | 160 | 397 | 656 |
| KwaZulu Natal | 17 | 14 | 83 | 397 | 511 |
| Western Cape | 1 | 1 | | 4 | 6 |
| **General Trade Customer Group** | **27** | **22** | **119** | **2169** | **2337** |
| Eastern Cape | | | | 81 | 81 |
| Gauteng | 15 | 14 | 94 | 1747 | 1870 |
| KwaZulu Natal | 4 | 4 | 16 | 334 | 358 |
| Western Cape | 8 | 4 | 9 | 7 | 28 |
| **Total** | **93** | **93** | **378** | **3055** | **3619** |

The data set in Table 6 represents the number of informal outlets selling Eskort products across the General Trade and Food Service Industry consumer groups, over the four regions under study, from 2016 to 2019. The data set reveals an upturn in distribution reach in the informal trade since Eskort (Pty) Ltd. partnered with Clover South Africa in their distribution programme Masakhane, in 2016. The Masakhane distribution channel enabled Eskort to disintermediate the supply chain, by eliminating intermediaries supplying the informal retail market. The disintermediation strategy allowed Eskort to reach the retail environment and food service industry in the rural townships in South Africa directly and allowed the organisation to have a direct influence on product basket, unit price and sales penetration. Gauteng and KwaZulu Natal remain highly penetrated, with these two regions contributing the highest penetrated outlets due to the close proximity to Eskort's distribution centres. Western Cape and Easter Cape have the lowest market penetration, as a result of being far from the distribution centres, and accessibility to these regions remains challenging.

Figure 6 gives a graphic illustration of the information in Table 6, showing the increase in geographical reach for both customer groups (GT and FSI), as a result of integrating disintermediation into the organisation's price pack architecture strategy.

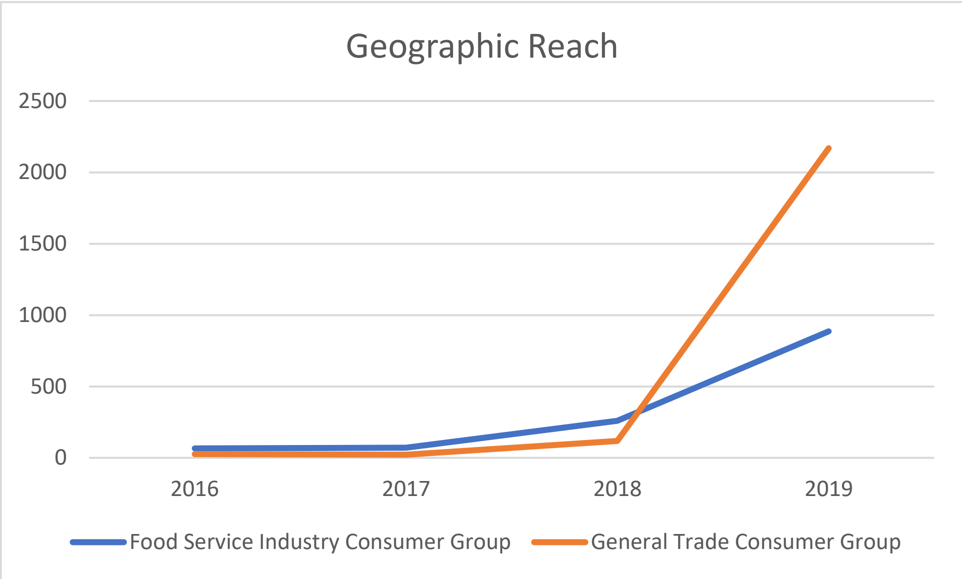


**Figure 6: Geographic reach for GT and FSI (2016 – 2019)**

### 4.4 Conclusion and summary of results

In this case study sales data was analysed for the entire population of sales that formed part of the Masakhane project to obtain the necessary insights for this research study. The population under study included two customer groups consisting of spaza shops (General Trade customer groups) and ready to eat meal outlets (FSI customer groups) that sold Eskort processed meat products across four geographic sites (Western Cape, Gauteng, KwaZulu Natal, and Eastern Cape). The data was observed from 2016 when Eskort joined Clover South Africa's informal trade distribution network named Masakhane, until 2019.

To summarise how the results have supported proposition 2, the two research questions formulated in this study have to be addressed. The outcome of the data analyses is summarised in the tables depicted in Chapter 4. The data provided in Chapter 4 (Table 6) shows that there was a clear upsurge in distribution into the informal market since Eskort (Pty) Ltd. joined the Masakhane distribution project in 2016. The organisation joined the distribution project as part of integrating disintermediation as a component of their price pack architecture strategy to overcome the distribution challenges experienced in attempting to reach the bottom-of-the-pyramid segment.

The Clover distribution project, Masakhane, is built on the premise that disintermediating the distribution channel will enable brands to obtain direct access to sell to spaza shop owners and FSI consumer groups. The growth in geographical expansion and increased reach into the informal trade suggest that the disintermediation strategy enabled Eskort (Pty) Ltd. to overcome the distribution challenges previously faced and highlighted in Chapter 2, which allowed them to reach the bottom-of-the-pyramid market segment effectively.

Data in Table 3 and Table 4 indicate the value proposition to both the customer groups of each respective stock keeping unit. The data indicates that over time (2016 to 2019) the costs per unit decreased as the sales volumes increased to create a strong value proposition for both customer groups in the informal trade. The disintermediation strategy applied by Eskort (Pty) Ltd. enabled the organisation to reduce the distribution complexities by creating a leaner supply chain and achieve the objective of frugal innovation. Disintermediation was adopted successfully, and the success was demonstrated in Table 6 where a clear upsurge in geographical expansion is illustrated over the four-year period (2016-2019). This disintermediation strategy enabled Eskort (Pty) Ltd. to extend the value proposition created for the market into the informal market to reach bottom-of-the-pyramid consumers. In essence the presentation of results in Chapter 4 illustrates that Eskort offered a product basket selection which the market required and deemed sufficient to meet their needs. It is evident through the analysis of the increase in sales volume demonstrated in Table 3 that the demand for the product category selections increased over the four-year period.

The value proposition presented in Table 4 illustrates the decrease of sales value in Rands which indicates that Eskort was able to articulate a pricing model which benefitted the customer groups.

## CHAPTER 5: DISCUSSION OF RESULTS

### 5.1 Introduction

This chapter provides a discussion of the research findings and the interpretation of the results, based on the literature reviewed in Chapter 2 relating to the bottom-of-the-pyramid segment, price pack architecture, frugal innovation, and disintermediation. Section 5.1 contains an introduction to the chapter and the Masakhane Distribution channel. Section 5.2 introduces the research problems and the gap in literature that this research study attempts to address, which relates to how the application of price pack architecture can aid organisations to effectively extend their reach into the bottom-of-the-pyramid market if all principles relating to price, product and distribution of products are successfully applied. Concurrently this study attempts to demonstrate the effect of integrating disintermediation as a component of price pack architecture to help organisations in the processed meat industry to overcome distribution challenges experienced in the rural townships of South Africa. Section 5.3 presents a discussion of the results described in Chapter 4, and section 5.4 addresses the propositions put forward at the beginning of the research paper. Section 5.5 concludes the chapter and the findings.

#### 5.1.1 Masakhane Distribution Channel

The Masakhane cold chain distribution channel was established in 2012 by Clover South Africa with the intent and purpose of directly infiltrating 100 000 informal traders in the bottom-of-the-pyramid market in South Africa. Masakhane is a dedicated bottom-of-the-pyramid distribution channel with a sales force dedicated to meeting the needs and requirements of the informal trade and making brands readily available to the General Trade and FSI clusters, offering the informal retail environment and FSI customer groups direct access to products, effectively disintermediating the traditional route-to-market channel. The Masakhane platform partnered with external organisations, seeking to strengthen the distribution channel through supply chain management, providing market related data, and increased visibility of brands, in far-flung informal retail stores (Van Woerkom, 2016).

Eskort (Pty) Ltd joined the Masakhane channel in 2016 as a distribution solution to effectively obtain a presence in the informal retail landscape. Prior to the Masakhane channel Eskort experienced great difficulty in securing an effective product acquisition model and faced logistic restrictions prohibiting access into the informal market. The organisation was mainly dependent on formal retail markets for the distribution of their products into the informal trade. The challenge persisted with formal retail chains being far removed from the rural developments, effectively leading to Eskort becoming reliant on informal distribution networks to get products to the spaza shops and FSI customer groups. This created a multimodal distribution approach, leaving the organisation with no control over market penetration, product acquisition, and brand visibility.

## 5.2 Research problem and gap in literature

Organisations to date have not been successful in effectively articulating price pack architecture strategies to target consumers at the bottom tiers of the economic pyramid residing in informal settlements. The main contributing factor leading to organisations failing at the attempt to effectively make their products readily available to the bottom-of-the-pyramid market is the barrier to entry into the informal retail environment. The major constrains prohibiting brands from penetrating the informal retail landscape and getting their products into spaza shops, informal outlets and the catering and hospitality industry in the rural settlements were the distribution constraints. The gap in literature was identified as a lack of research reports describing how the integration of disintermediation as a component of price pack architecture strategies can allow businesses to bridge the distribution gaps and find a supply chain solution to enable them to get their products into the bottom-of-the-pyramid market in South Africa.

## 5.3 Discussion of results

### 5.3.1 Discussion pertaining to Price Pack Architecture (PPA)

Considering the extensive literature in Chapter 2 price pack architecture can work effectively to help organisations extend their market reach. Referring back to the definition of price pack architecture, if applied effectively PPA could help organisations to deliver a product to a particular consumer segment, to meet their needs, at a price point they are willing but also able to pay, permitting that the consumer has accessibility to the product. (Davey, & Florio, 2016). However, when looking at the specific subpopulation of the South African market and more specifically the bottom-of-the-pyramid segment, price pack architecture is exceedingly challenging as a result of the distribution challenges which cause a barrier to entry for many organisations attempting to penetrate this market. Several literature studies discuss the challenges organisations face to reach the bottom-of-the-pyramid market effectively. Most organisations cannot obtain direct access to the informal trade which consist of spaza shops, mom and pop shops and street vendors to essentially get their products to the bottom-of-the-pyramid consumers market, which ultimately leads to this market being overlooked and excluded from many organisation's target audiences. Consequently, the distribution challenges lead to this market being excluded from the formal economy and becoming unserved consumers to many businesses. Accessibility to adequate resources is an ongoing challenge for consumers residing in rural townships in South Africa, and cost-effective consumable goods is no different. However, integrating disintermediation as a component of price pack architecture has been demonstrated to enable organisations to reach this segment and articulate price pack architecture adequately. Using Eskort (Pty) Ltd, as a case study of the processed meat industry, provided the opportunity to demonstrate how the amalgamation of two theoretical constructs can overcome the distribution challenges to achieve price pack architecture successfully in the bottom-of-the-pyramid market.

#### 5.3.1.1 Value Proposition

The data analysis in Chapter 4 (Table 3 and Table 4) depicts the sales value over sales volume across a four-year period ranging from 2016 to 2019. The results indicate that over the four-year period there has been a reduction in the sales value in Rands as the sales volume increases, effectively creating a value proposition for the informal trade customers. The disintermediation strategy applied by Eskort (Pty) Ltd. in partnership with Clover South Africa enabled the organisation to reduce the distribution complexities by creating a leaner supply chain and to achieve the objective of frugal innovation. The incorporation of disintermediation as a component of price pack architecture enabled Eskort (Pty) Ltd. to create a strong value proposition and offer products at a reduced cost, effectively proving the efficiency of the price pack architecture application by Eskort (Pty). Ltd. Price pack-price architecture is deemed to be more sustainable when maintaining a fine balance between volume and value (Nielsen Report, 2017).

Reviewing the data set and results in Chapter 4 (Table 3 and Figures 2 and 3) brings to light a significant upsurge in sales over the four-year period, ranging from 2016 to 2019 across all geographic sites at study, in both the General Trade and the FSI customer groups. The data in Chapter 4 (Table 4) reveals a general reduction in price point per stock keeping unit over the four-year period.

In personal communication with Eskort Sales Director, James Richter (2020), it was noted that with the growth of the product basket in the informal retail environment, the expansion in geographical reach and application of economies of scale through disintermediating the supply chain enabled the organisation to construct a price point deemed profitable on both accounts (Eskort and the informal market) to articulate a price pack architecture business model benefiting all parties. Further mention was made that articulating the right basket of products for the informal retail environment to address the need of the end user buying from the spaza shops and informal stores, plays a significant role in constructing price pack architecture adequately (J. Richter, personal communication, March 15, 2020).

A Nielsen-based study on price pack architecture reported that a few daily-need categories have made small packs sizes a growth lever in their businesses, giving brands the opportunity to create immediate consumption occasions, mitigating the monotony created by the former dependence on large packs (Udasi, Gupta, & Kanchan, 2017). While it was also noted from previous studies relating to price pack architecture that consumers living in impoverished conditions may prefer smaller pack sizes due to the convenience aspect and because it allows them to manage their cash flow and limit daily spend (Mtshemla, 2014), the results and data analysis for this study as depicted in Chapter 4 dispute this statement. The results in Chapter 4 (Table 3) indicate the relationship between pack sizes for each of the stock keeping units sold to the informal retail environment across four regions and the sales volume over time. The sales data indicate that smaller pack sizes in the processed meat category have no significance in the consumption patterns or in the demand from the spaza shop owners and informal retail environment. Pack size does not seem to influence the price pack architecture strategy implemented by Eskort (Pty) Ltd.

Considering the analysis discussed in the preceding paragraph, it should be noted that the product basket sold at the price points, efficiently grew the market size and market share of Eskort products in the informal trade across the four provinces. The sales data therefore indicates an effective price pack architecture strategy and suggests that the selected basket of products meet the needs of the consumer segment, and is sold at a price point they are both willing and able to pay. This was achieved by disintermediating the supply chain to reduce complexities and introduce a leaner supply chain model, consequently reducing the distribution costs and target the bottom of the pyramid market directly. Disintermediating the supply chain not only enabled direct access to the informal market but also allowed Eskort (Pty) Ltd, to offer consumers at the bottom-of-the-pyramid market a competitive price point and create a stronger value proposition to these consumers.

#### 5.3.1.2 Summary of Price Pack Architecture (Proposition 1)

In light of the preceding discussion of results it can be concluded that the construct of disintermediation as an applied component of price pack architecture, which focuses on creating a value proposition for customers through carefully articulating the right product basket at the right price point, positively impacts an organisations' attempt to effectively target and reach the impoverished bottom-of-the-pyramid market. Eskort (Pty). Ltd. has successfully reduced the cost at which they sell the products to the informal market segment residing at the bottom of the pyramid to create a value proposition for the market under study. Concurrently they made available a basket of products which was deemed successful and stimulated demand in the informal market.

### 5.3.2 Disintermediation as a component of Price Pack Architecture

The literature review in Chapter 2 identified that frugal innovation is specifically crafted to target mass markets, motivated to support high volume sales at low margins by applying economies of scale to reduce costs (Tiwari, Kalogerakis & Herstatt, 2016). This is particularly relevant to South Africa as the middle and lower tiers of the economic pyramid are deemed the fastest growing segments in the country (David-West, Iheanachor, & Umukoro, 2019). It is argued that frugal innovation does not revolve around physical product innovation exclusively but also includes reducing the complexities throughout the entire value chain. For the purpose of this research paper, frugal innovation addresses the complexities around the route-to-market challenges relating to the distribution channel inefficiencies and the barrier to entry into the informal trade.

Furthermore, frugal innovation is applied through integrating disintermediation as a component of price pack architecture, in order to bridge the distribution gap and effectively reach the informal retail environment. The incorporation of disintermediation as a component of price pack architecture enabled Eskort (Pty) Ltd. to sell directly to spaza shop owners, informal traders, and the informal food service industry sector.

From personal communication with Eskort former Marketing and Sales Director, Martin Lancefield (2019), it was noted that previous attempts to reach the informal trade were deemed unsuccessful due to the distribution limitations faced by Eskort. Route-to-market accessibility was a challenge faced by the company as their distribution channels did not allow the organisation to have direct access into the informal segment to successfully reach the bottom-of-the-pyramid market. It was stated that prior to embarking on the partnership with Clover through their Masakhane distribution channel, Eskort depended on informal distribution networks to obtain a presence in the informal retail and food service industry environments. The informal route-to-market channel acted as a wholesale channel, buying products in bulk from wholesalers, warehousing the stock, and selling to the informal establishments. Therein lies three major challenges for both brands and store owners. Firstly, the store owners relied on runners for the purchase of the stock to resell, effectively leaving the owner of the store with no buying power. Secondly, the informal store owners purchasing from the distribution network are confined to having accessibility only to the brands and product baskets that the distribution network purchases and sells, limiting their buying and bargaining power. Thirdly, the distribution network acts as a wholesale channel that needs to run a profitable business, therefore the spaza shop owners do not purchase their stock at the best possible price as they would when purchasing directly from the manufacturer (M. J. Lancefield, personal communication, October 14, 2019).

Since embarking on the Masakhane project implemented by Clover South Africa, the opportunity was created for brands to disintermediate the supply chain and give customers direct access to their products, to build relationships with store owners, and to expand their presence in the informal retail and FSI markets. Reducing the complexities of the distribution model to create a leaner supply chain was an effective implementation of frugal innovation.

**5.3.2.1 Disintermediating the supply chain.**

The data analysis in Chapter 4 (Table 6) indicates the number of outlets sold to by Eskort (Pty) Ltd., in both the Food Service Industry (FSI) and General Trade customer groups, across the four regions namely Eastern Cape, Gauteng, KwaZulu Natal, and Western Cape. The data set is analysed over a four-year period, from 2016 to 2019. The results indicate a significant growth in the number of outlets. The FSI cluster grew by 92.5% from 2016 to 2019, procuring an additional 820 stores in the cluster, while General Trade grew by 98.8% in the same period with an additional 2310 stores by 2019. Considering the results displayed in table 6 it is evident that the implementation of disintermediation into the supply chain model, enabled Eskort (Pty) Ltd, to reduce the supply chain complexities, directly access the informal market while cost effectively expanding their market reach in the informal segment over the four-year period . Prior to embarking on the partnership with Clover South Africa, the business' route-to-market into the informal trade was limited to informal distribution networks which proved to be an ineffective approach to push product into spaza shops and food service industry environments. While the informal networks did not present the opportunity for spaza shop owner and food service industry customers to have a wide selection of product to choose from, this distribution model further restricted informal traders to order stock once a month, which were deemed inefficient when considering moving stock quickly.

Since introducing on the Masakhane distribution model to their supply chain strategy, Eskort (Pty) Ltd. was able to take products directly to their informal trade customers, which enabled the spaza shop owners and food service industry customers to order smaller quantities of stock more frequently. This enabled the business to provide accessibility to a larger product basket, at a competitive price point. The data set in table 6 illustrates the positive effect of applying disintermediation to expand the business's reach into the informal market where the majority of the bottom-of-the-pyramid reside.

Considering the above criteria, it is demonstrated how this business model allowed Eskort (Pty) Ltd, to successfully apply all theoretical constructs relating to product, price and availability to achieve price pack architecture, which was previously not made possible without the incorporation of disintermediation as part of their supply chain strategy. Eskort (Pty) Ltd.

Eskort has no sales history pertaining to their sales into the informal trade prior to 2016 (the start of partnering with Clover South Africa on the Masakhane project). As mentioned previously, the distribution network purchased products from wholesalers and informal distribution networks, leaving the organisation with no measure to trace sales in the rural settlements of South Africa prior to 2016.

#### 5.3.2.2 Summary pertaining to Disintermediation as a principle of Price Pack Architecture

In can be concluded that the integration of disintermediation as a component of price pack architecture positively influences the attempt of organisations in the processed meat industry to penetrate both customer groups (General Trade and Food Service Industry) in the bottom-of-the-pyramid market, enabling brands to grow their geographical reach into this informal segment where the bottom of the pyramid resides. The objective of frugal innovation was therefore achieved.

The discussion of results in Chapter 4 leads to the conclusion that Eskort (Pty). Ltd. was able to successfully adapt their pricing model and to reduce the cost at which they sell their products to the informal market segment. This led to the organisation being able to articulate a value proposition for the bottom-of-the-pyramid market. Alongside the pricing architecture model, they produced a basket of products that meets the demands of the informal market. Lastly, they ensured that the pricing and product architecture strategy were made available to the informal market by disintermediating the supply chain and targeting the bottom-of-the-pyramid segment directly, eliminating the distribution challenges previously creating barriers to entry.

### 5.4 Delimitations of the study

The delimitations of the study were discussed in Chapter 1. The researcher decided to exclude 2020 from the research study as a result of the global pandemic COVID 19 being declared as a national state of disaster in South Africa. The researcher decided that the data would not be a true representation of current trade conditions, but recognises that COVID 19 could have had an impact on a study of this nature. COVID 19 brought a unique set of supply chain disruptions for most businesses, which poses severe and long-lasting effects on supply chain operations (Paul & Chowdhury, 2020). A brief from the World Bank (Geaneotes & Mignano, 2020) reported that global poverty rates are predicted to surge significantly, and projections show that an additional 49 million people are anticipated to be pushed into extreme poverty as a result of COVID 19. It is noted that the effects will hit the impoverished markets the hardest. The report further points out that kiosks, spaza shops and mom-and-pop shops face constraints in sustaining themselves and their families during the economic downturn and price hikes. The economic effect on consumers leaves organisations with the responsibility of being agile and nimble to adjust their value chain operations to meet the needs of the base of the pyramid. The extensive literature review in Chapter 2 highlights the pervasive challenges organisations face when trying to reach the bottom-of-the-pyramid market. However, studies suggest that COVID 19 has elevated the need for organisations to adapt products and distribution channels even further than was required before the pandemic hit. Reports suggest that manufacturers consider adapting their products and services to a greater extend to enable small operations such as spaza shops and kiosks to continue operating. Several manufacturers are processing products to extend shelf life and finding lucrative distribution models which offer effective and contactless delivery of goods and services (Geaneotes & Mignano, 2020).

Adapting product pack sizes to satisfy immediate consumption while considering the reduced disposable income and limited daily spend is a rising need at the base of the pyramid and reports indicate that reduced pack sizes are becoming more essential and have a positive impact on service levels since the outbreak of COVID 19 (Paul & Chowdhury, 2020). Taking these concerns into consideration it is evident that there is a continuous need for organisations to apply price pack architecture strategies to offer the bottom-of-the-pyramid market innovations that meet their current and changing needs.

Since the outbreak of the pandemic, the basket of goods on which the Consumer Price Index insights are based is not deemed a true representation of consumers' actual spend. Consumers' shopping patterns and buying behaviour have changed and studies note that supply chain disruptions and stockpiling are driving consumers to buy smaller pack sizes at a higher cost per unit (Blundell, Griffith, Levell, & Connell, 2020), suggesting that price pack architecture is not being applied and managed adequately by brands.

## 5.5 Conclusion

From the preceding discussion, it can be concluded that the integration of disintermediation as a component principle of price pack architecture enables organisations in the processed meat industry to successfully penetrate the informal market in order to reach the bottom-of-the-pyramid consumer segment.

Further to the interpretation of the research findings, it is evident that COVID 19 has had a severe impact on consumer behaviour and shopping patterns and consumers are forced to buy products in smaller pack sizes at a higher cost, implying that price pack architecture is not articulated or considered by most organisations during the world pandemic.

# CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

## 6.1 Introduction

This chapter concludes the study. The main research problem and question depicted in Chapter 1 are addressed and responded to in this chapter. The conclusion is followed by recommendations to the contributors of this study identified in Chapter 1, based on the outcome and findings of this research study. Following the recommendation to the stakeholders, suggestions for future research are made to aid future researchers attempting to address studies within this field.

## 6.2 Theoretical implications

### 6.2.1 Bottom-of-the-pyramid segment

The literature in Chapter 2 brings to light the challenges faced by organisations attempting to successfully penetrate the bottom-of-the-pyramid consumer segment. Many organisations battle to articulate a successful business model that aligns and addresses the unique market characteristics and consumer antecedents of the bottom-of-the-pyramid market. Numerous challenges are preventing businesses from achieving mutual value creation and effectively applying price pack architecture strategies to meet the needs of the impoverished market at the base of the pyramid. Several businesses have attempted price pack architecture strategies and according to literature, if all theoretical constructs relating to product, price and accessibility are applied, organisations can extend their market reach into new segments. However, when doing business with the base-of-the-pyramid subpopulation, distribution challenges restrict a seamless integration of price pack architecture strategies. When relating price pack architecture to the bottom-of-the-pyramid market, an additional construct needs to be incorporated into the theory to achieve a successful price pack architecture strategy to reach the base of the pyramid.

### 6.2.2 Price Pack Architecture

The literature in Chapter 2 describes how many organisations have not been able to effectively apply this strategy to target the largest, but poorest socio-economic group due to this segment’s unique characteristics. For organisations to effectively expand their market reach into the informal segment, all aspects of price pack architecture need to be addressed, in essence ensuring that product innovation is developed to address the particular needs of the bottom of the pyramid, while ensuring that products are sold at a price point which the poverty-stricken market is both willing and able to pay and ultimately ascertaining that the products are accessible to the segment. However, research has indicated that the main contributing factor preventing organisations from tapping into the base-of-the-pyramid segment and achieving a successful price pack architecture approach, is to be found in distribution challenges obstructing the principle of availability in price pack architecture. Due to informal retailers being far-flung and the institutional voids alongside the inadequate distribution channels, this market presents several barriers to entry. As a result of distribution inabilities many brands have relied on a multimodal distribution channel to get products into the hands of consumers in rural developments, leaving businesses with no control over the value chain.

### 6.2.3 Frugal Innovation

The literature review in Chapter 2 revealed that frugal innovation enables businesses to reduce intricacies that pose business challenges. From the point of view of this research case study, frugal innovation is applied through the integration of disintermediation as a component of price pack architecture which enables organisations to streamline the multimodal distribution chain. The amalgamation of the two theoretical constructs permitted Eskort (Pty) Ltd. to target the informal trade directly though partnering with an external cohort, Clover South Africa, through their Masakhane cold chain distribution channel.

The extensive literature reviewed in Chapter 2 suggests, furthermore, that price pack architecture can be used as an effective tool to tap into the bottom-of-the-pyramid market segment when frugal innovation integrates disintermediation as a price pack architecture component.

Price pack architecture implies providing product innovations at a price point deemed fair and affordable while ensuring availability to the bottom end. In the context of the research and literature review in Chapter 2, accessibility is a major challenge impeding the price pack architecture strategy to the bottom of the pyramid. However, integrating disintermediation as a component of price pack architecture enables organisations to achieve the objective of frugal innovation to allow organisations to constructively extend their reach to the base-of-the-pyramid market.

### 6.2.4 Disintermediation

The literature review in Chapter 2 reveals how disintermediation can streamline a multi-layered supply chain model, by displacing unnecessary supply chain links to create a leaner distribution channel and target the bottom of the pyramid segment directly. Disintermediating the supply chain lends the opportunity to businesses to service the informal trade directly and more frequently, while reducing distribution cost, enhancing value proposition in the mind of the consumer, and strengthening direct relationships with customers, which without disintermediation was not made possible.

The Masakhane project discussed in Chapter 2, described how Clover South Africa reengineered the distribution model in 2012 and present brands with the opportunity to access their informal trade customers directly through their hub-and-spoke distribution model. This approach enabled businesses to have more control of the entire value chain while ensuring that their brands and products reach the consumers in the bottom-of-the-pyramid market. Disintermediating the supply chain enables many businesses to extend their reach beyond the middle and top tiers of the economic pyramid consumers to reach the impoverished market residing in outlying rural areas effectively.

## 6.3 Conclusion (Practical implications)

The findings of this study discussed in Chapter 5 demonstrate that Eskort (Pty) Ltd. was able to articulate the right selection of processed meat products that served the demands for an affordable meat protein to the low-income consumers residing at the bottom-of-the-pyramid market. The increase in sales volume depicted in Chapter 5 (Table 3) proved that the selected categories alongside the pack size per stock keeping units (SKU) met the desire for various consumption occasions in both the General Trade and Food Service environments. Alongside the right product selection Eskort (Pty) Ltd. was able to offer a competitive price point that created a value proposition for the market by offering a priced deemed fair and affordable by the market at study as analysed in Chapter 5 (Table 4). Chapter 5 (Table 6) illustrated how the integration of disintermediation as a strategic construct of price pack architecture has had a positive outcome in extending the organisation’s distribution into the BOP market residing in far-flung rural areas in South Africa, ensuring that the accessibility pillar of price pack architecture was achievable.

Based on the above theoretical and practical implications it can be concluded that the-bottom-of-the-pyramid segment remains exceedingly challenging to businesses wanting to target the impoverished market through the incorporation of a price pack architecture strategy. The bottom-of-the-pyramid market presents significant distribution challenges to businesses, causing a barrier to entry for many organisations attempting to penetrate this market However, this case study provides descriptive evidence that the distribution gap can be addressed when applying frugal innovation through incorporating the theory of disintermediation as a pillar of price pack architecture to reach this market effectively.

In accordance with the results pertaining to this study, it is proven that frugal innovation in the form of disintermediation had a positive and direct influence on bridging the distribution challenges to achieving price pack architecture in the bottom-of-the-pyramid-market. Therefore, addressing Proposition 1 that set out to find an additional construct to enable businesses to achieve price pack architecture in the informal, bottom-of-the-pyramid-market. Incorporating disintermediation as a component of price pack architecture enabled the organisation at study to successfully reduce the distribution complexities and effectively expanding reach into the informal markets in South Africa, addressing proposition 2 in this research study.

### 6.5 Recommendations

For organisations to successfully penetrate the bottom of the economic pyramid, they need to carefully articulate all components of price pack architecture. Several studies have recommended that businesses consider the introduction of smaller pack sizes for the stock keeping units sold in the informal trade. Even though the results in Chapter 4 indicated that the standard pack sizes did not influence the sales of the product basket sold in the informal market, smaller pack sizes are believed to encourage trial, foster repeat purchase, and encourage consumers to trade up to larger pack sizes post trial. For a continuous and well-orchestrated price pack architecture strategy Eskort (Pty) Ltd should consider introducing smaller pack sizes to provide convenience, an immediate eating occasion, and enable cash strapped consumers at the base of the pyramid to increase their basket size while ensuring that brands remain part of the shopping basket of consumers with limited daily disposable income.

Price pack architecture is a business model that includes product attributes, pricing, and availability to satisfy consumers' needs. An opportunity exists for Eskort (Pty) Ltd. to expand their basket size to include fresh pork meat cuts. The current product basket offered and sold by Eskort (Pty) Ltd. to the BOP market in the informal trade, through the Masakhane distribution channel, consists solely of processed meat products. The introduction of their frozen non-processed meat cuts into the trade could aid in driving market growth and market share. The challenge, however, lies in the fact that the Masakhane distribution channel is a cold chain supply channel that distributes chilled rather than frozen products. An option for Eskort (Pty) Ltd. to grow their market share and expand their range could be to partner with external cohorts that focus on the distribution of frozen food items, in effect opening new markets to the business and targeting new sets of customers for the organization's products.

Price pack architecture has proved to be effective in reaching the bottom-of-the-pyramid market by incorporating disintermediation as a construct and reaching new markets previously not accessible though the traditional distribution channels. There is an opportunity to extend Eskort's reach beyond the regions currently at focus, through their affiliation with Clover South Africa and the Masakhane distribution program. Findings depicted in Chapter 2 indicate that the bottom-of-the-pyramid segment represents between 60% and 70% of the total South African population (Lappeman, Zornitta & Mowzer, 2020), with a large portion residing in informal settlements scattered across South Africa. Based on the data and finding presented in Chapter 5, it is noted that Eskort's distribution into the informal trade largely focus on four core regions (Eastern Cape, Gauteng, KwaZulu Natal and Western Cape), presenting the opportunity to extend their reach to the bottom-of-the-pyramid populating residing in Limpopo, North West, Northern Cape, Free State and Mpumalanga.

### 6.6 Suggestions for future research

This research study proposed to provide descriptive evidence on how the amalgamation of two theoretical constructs can address a distribution hurdle in the informal market. The descriptive evidence demonstrates how the integration of disintermediation as a component of price pack architecture enables organisations to overcome the distribution challenges in the BOP market that create a barrier to entry for many businesses.

Three focused business strategies were researched in parallel to establish the relationship and effect on expanding into new markets. The three strategies are (i) price pack architecture; (ii) frugal innovation; and (iii) disintermediation. Research identified price pack architecture as the core strategy that allows organisations to penetrate new markets. Distribution into the informal market is challenging, and many organisations struggle to get products into the rural townships of South Africa effectively, and many manufacturers are prevented from achieving a holistic price pack architecture strategy when attempting to reach the bottom-of-the-pyramid segment.

This research study demonstrated how the integration of disintermediation strategies as a component factor of price pack architecture enables organisations to overcome these distribution challenges to achieve holistic price pack architecture and expand their distribution into the informal rural townships. Aligning these three strategies is critical for reaching geographically dispersed markets and overcoming the distribution barriers to entry in the informal retail landscape.

The limitations of this study also suggest opportunities for future research. Future researchers studying these theories and concepts with longitudinal data can provide further insights into the relationship between the core theories under study. In addition, future research can integrate a mixed method approach by including both qualitative and quantitative research methods to provide a more in-depth understanding of the relationships.

A further limitation results from the data set encompassing the distribution and sales data of Eskort’s processed meat product category alone. Future studies can aim to conduct the same investigation for different product categories of consumer-packaged goods.

The study at hand focused on disintermediation strategies through partnering with the Clover South Africa Masakhane cold chain distribution channel. This distribution channel is intended solely for distribution of products in a chilled and refrigerated configuration. Future researchers can expand on the field of investigation to distribution of perishable goods in frozen format or distribution of non-perishable items into the informal trade.

The research study considered but excluded sales during 2020, because of COVID19. Future research can be conducted around servicing the bottom-of-the-pyramid market more efficiently during the pandemic crisis which poses severe and long-lasting effects on supply chain operations. Since the rise of the world pandemic consumer demands have changed drastically, particularly in the BOP market.

An article on the impact of COVID 19 on the FMCG landscape in South Africa noted that as a result of the pandemic, consumer behaviour is continuing to evolve, more so than before the outbreak of COVID 19. Serval challenges arise as initial panic buying led to stock shortages, while impulse buying was limited amongst consumers. Many consumers purchase fewer items at higher value and consumers have changed their shopping patterns which include less frequent but more targeted shopping trips. The change in consumer buying patterns not only changed how consumers shop but also the person responsible for shopping for household necessities, in turn influencing the brand and product of choice. Product purchases are also influenced by consumers downtrading their product selection as a result of discretionary spending to include more affordable household staples and goods. Packaging and product innovation that offer value for money to cost conscious consumers is likely to become a trending topic. Bringing to light the need to future research around the incorporation of price pack architecture strategies to accommodate for the "new normal", particularly for consumers residing in the bottom-of-the-pyramid market.

The research results are indicative of consumer behaviour, consumption patterns, and specific consumer needs at the bottom of the pyramid in four regions across South Africa. Even though the insights could be of value to future researchers studying BOP markets, it cannot be accepted that the research results can be generalised to bottom-of-the-pyramid consumers globally.

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## APPENDIX A: DRAFT CONSENT FORM

31 Sovereign Drive

Route 21 Corporate Park

Irene

Pretoria

0145

7 November 2019

Dear Eskort

I trust this email find you well.

I am doing my master's degree dissertation on the topic of how price pack architecture, through frugal innovation can aid organisations to penetrate the emerging markets of South Africa.

The thought of this topic came to mind based on Eskort jointly working with Clover SA to achieve market reach expansion into this segment, supported by, the gap in literature addressed by N Van Woerkom, who's MBA thesis placed focus on the Masakhane project but relating to the topic of product pack sizes.

I would hereby like to request your assistance with secondary data and insights based on how disintermediation and frugal innovation helps organisations to achieve expansion into the informal market segment, previously untapped.

All internal information shared will be kept confidential and also stated in the appendices to ensure it remains intellectual property of Eskort.

Your assistance by sharing your insights and intellectual property, will aid me to substantiate the theory of my research project.

It would be greatly appreciated if you show willingness to assist me in this regard.

Your response will greatly be appreciated.

Thank You,

Domaine Rautenbach.

Eskort Brand Manager

Email: domainer@eskort.com

Contact number: 012 345 4452

## APPENDIX B: LETTER OF PERMISSION

### APPENDIX B: LETTER OF PERMISSION ESKORT PTY LTD.

ESKORT

TYPICAL CONTACT INFORMATION

| | |
|---|---|
| TELEPHONE: | +27 (0) 12 345 4452 |
| EMAIL | info@eskort.com |
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0800 203 193 @Eskortlifesdelicious @eskortfood

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For the environments sake, please think twice before printing.

Life's Delicious

11 November 2019

WITS Business School
2 St Davids Place &, St Andrew Rd
Parktown
Johannesburg

To whom it may concern at the WITS Business School

This letter serves as confirmation of our knowledge that Domaine Rautenbach, will be doing her research study for her thesis on the topic; price pack architecture through frugal innovation in the South African emerging markets. We acknowledge that the study aims to investigate whether the adoption of price pack architecture strategies will aid organisations in the commercial market of food productions in South Africa to effectively penetrate the emerging market segment. Concomitantly, this paper will investigate whether frugal innovation solidifies price pack architecture strategies through the adoption of disintermediation.

We grant permission to Domaine Rautenbach to utilise Eskort's internal data where necessary for this study

- Emerging market size in sales figures, prior to Masakhane partnership
- sales data and figures (growth) of respective products sold through the Masakhane distribution channel;
- list of products sold to the emerging market segment through the Masakahane distribution channel (Clover and Eskort);
- Supplier selling price of respective sku's to the emerging market resellers (spaza shops, informal intermediaries)
- Product unit size sold to informal trade/spaza shops
- geographical reach of informal settlements since partnering with Clover.

We are aware that participation is voluntary and that we can withdraw our participation at any given point in time.

If any further detail is required, we can be contacted at (012) 345 4452

Yours Sincerely
Eskort Pty Ltd

James Richter
Sales Director

SINCE 1917 FRESHNESS & QUALITY

Eskort Proprietary Limited, 31 Sovereign Street, Route 21 Corporate Park, Irene, 0157.

PO Box 95202, Waterkloof, 0145.

**Directors:** GH Braak (Chairman), JP van der Walt (Vice-Chairman), GF Bezuidenhout, GH Braak (Jnr.), PP Fourie, ID Goosen, AH Holtzhausen (Secretary), MJ Lancefield, AR Prinsloo (CEO). **Eskort Proprietary Limited**, Registration Number 1997/022579/07.

## APPENDIX C: CONSISTENCY MATRIX

| Aims of research | **Literature Review** | **Research Questions** | **Propositions** | **Analysis** |
|---|---|---|---|---|
| The primary objective of the proposed study is to investigate whether the adoption of price pack architecture strategies will aid organisations in the processed meat industry in South Africa to effectively penetrate the informal market to reach the BoP consumer. | Hosman & Fife (2012)<br>Picciola & Wilson (2016). | **Main Research Question:**<br>Does the adoption of price pack architecture aid organisations to effectively penetrate the informal market of South Africa to reach the BoP consumer? | Proposition 1<br>P1: Price pack architecture can be applied by organisations to effectively extend their reach into new market segments, if all theoretical constructs relating to product, price and accessibility are applied. However, when it relates to the bottom-of-the-pyramid market, an additional construct needs to be incorporated into the theory to achieve a successful price pack architecture strategy to reach the base of the pyramid. | Exploratory data analysis through case research study using secondary data, to give proportions of weightings |
| This research study will attempt to investigate whether frugal innovation solidifies price pack architecture strategies through the adoption of disintermediation | Winterhalter et al. (2017)<br>Cai, et al. (2019) | **Research Sub Question 1**<br>Does frugal innovation solidify the concept of price pack architecture through the application of disintermediation strategies? | Proposition 2:<br>P2: The integration of disintermediation as a component of price pack architecture can aid organisations to overcome the distribution challenges in the bottom-of-the-pyramid market that currently prohibit organisations from effectively applying price pack architecture in the informal rural environments in South Africa. | Exploratory data analysis through case research study using secondary data, to give proportions of weightings |

## APPENDIX D: Seminal Model – VISOR MODEL: *Top-Down-Meets-Bottom-Up Partnering*

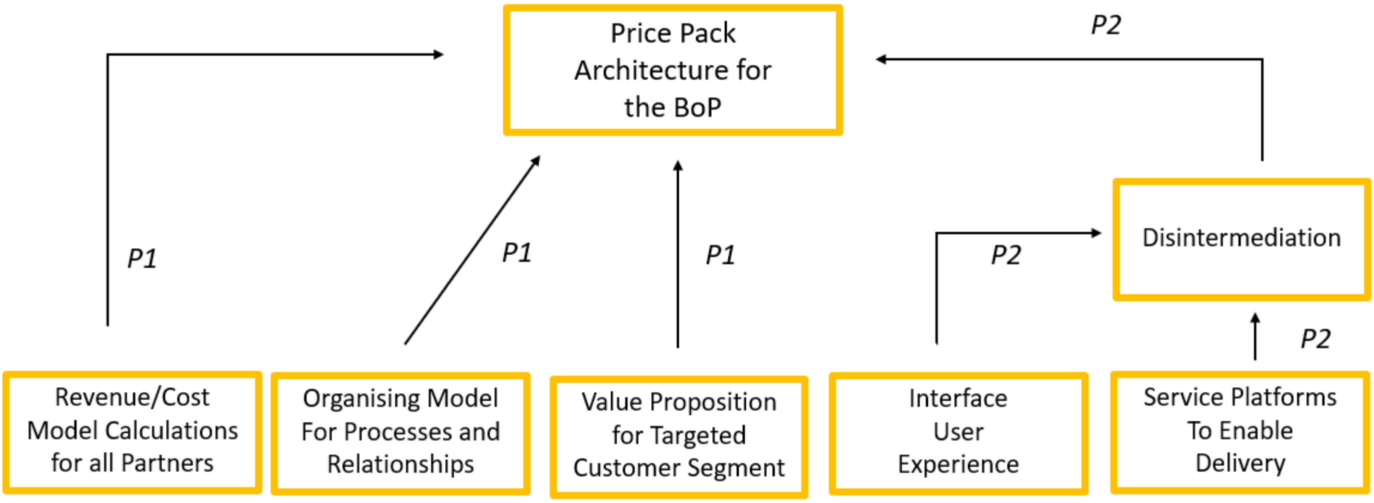


Figure 1: VISOR Business Model: Top-Down-Meets-Bottom-Up Partnering (Hosman & Fife, 2012) adapted to incorporate disintermediation as a construct of price pack architecture to reach the bottom of the pyramid market in South Africa